EFFECTIVENESS OF GINGER TEA ON DYSMENORRHEA AMONG COLLEGE STUDENTS IN SREE MOOKAMBIKA COLLEGE OF NURSING

A DISSERTATION SUBMITTED TO THE TAMILNADU DR.M.G.R. MEDICAL UNIVERSITY CHENNAI, IN PARTIAL FULFILMENT FOR THE DEGREE OF MASTER OF SCIENCE IN NURSING

APRIL 2016

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Internal Examiner

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APPROVED BY DISSERTATION COMMITTEE ON : 23.12.2014

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Bonafide Certificate

This is to certify that the dissertation entitled **"A study to assess the effectiveness of Ginger Tea on Dysmenorrhea among college students in Sree Mookambika college of Nursing, Kulasekhara at Kanyakumari District"** is a bonafide research work done by **Mrs. V.M. Amutha, II year M.Sc (N),** Sree Mookambika College of Nursing, Kulasekharam under the guidance of **Mrs. Joseclin Sheeba, M.Sc., (N), Asst. Professor, Obstetrics and Gynecological Nursing and Prof. Dr. Mrs. T.C. Suguna, M.Sc. (N), MA, Ph.D. HOD, Obstetrics and Gynecological Nursing** in partial fulfillment of the requirements for the Degree of Master of Science in Nursing under TamilNadu, Dr. M.G.R Medical University.

Principal

Place : Kulasekharam
Date : 10-02-2016

Sree Mookambika College of Nursing,
Kulasekharam.

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Declaration

I hereby declare that the present dissertation titled **"A study to assess the effectiveness of Ginger Tea on Dysmenorrhea among college students in Sree Mookambika college of Nursing, Kulasekhara at Kanyakumari District"** the outcome of the original research undertaken and carried out by me under the guidance of **Mrs. Joseclin Sheeba, M.Sc. (N), Asst. Professor, and Prof. Dr. Mrs. T.C. Suguna, M.Sc. (N), M.A., Ph.D.** HOD, Obstetrical and Gynecological Nursing in Sree Mookambika College of Nursing, Kulasekharam. I also declare that the material of this has not formed in anyway, the basis for the award of any degree or diploma in this university or any universities.

Place: Kulasekharam **Mrs. V.M. Amutha**

Date: 10-02-2016 II year M.Sc(N)

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INVESTIGATOR

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Abstract

Dysmenorrhea is common among college students which affect daily activities leading to limitations of their social, academic and recreational activities. The main objectives of the study was to assess the effectiveness of ginger tea on dysmenorrhea among college students. The research design selected for the study was non-equivalent pre test and post test control group design. A purposive sampling techniques was used to obtain sample of 60 college students (30 in experimental group and control group); who satisfied the inclusion criteria. Pre-test level of dysmenorrhea was estimated by using numerical Pain Rating Scale, for both experimental and control group followed by ginger tea 100ml was administrated 3 times(morning, afternoon, evening) on the first 2 days of menstruation for the experimental group. On the second day evening post test was done for experimental and control group by using the same scale. Ethical aspect of this study maintained throughout the study. The data were analyzed using descriptive and inferential statistics. The study identified that 43.33% had moderate pain, 56.67% had severe pain and none of them hade mild and no pain for the experimental group. In control group 46.67% had moderate pain, 53.33% had severe pain. The study result shows that the pre-test mean value for experimental group is 7.03 and pre-test SD s 1.09. In control group the pre-test mean value is 6.96 and pre-test SD is 1.06. The post-test mean value for experimental group is 3.36 and post-test SD is 1.54. In control group post-test mean value is 6.26 and SD is 1.17. The mean difference is 3.66. The calculated‘t’ value is 15.19 is higher than the table value 2.05. Hence there is a reduction in level of dysmenorrhea after administration of Ginger tea among college students. The study concluded that Ginger tea found to be an effective non-pharmacological measures to reduce dysmenorrhea among college students.

Keywords: Dysmenorrhea, College students, Ginger.

CHAPTER - I

Introduction

"Pain is temporary, Quitting lasts forever"

- Lance Armstrong

Yesterday's girl is todays adolescent and tomorrows mother. The word adolescent is derived from the latin word "Adolescere" meaning "to grow up". Approximately one fifth of the worlds population is in the age group of 10-19 years as they are passing through a transitional period from childhood to adult hood. Today 1.2 billion adolescents stand at the cross roads between childhood to adult world. Around 243 million of them live in India. 71 million were in Tamil Nadu. They are undergoing a lot of physical as well as psychological stress due to changes taking place in the body (Eswi et al 2012).

WHO (World Health Organization) defines an adolescent as any person between ages 10 and 19. WHO definition of young people which refers to individuals between 10 and 24. However adolescence is narrowly equated with puberty and the cycle of physical changes culminating in reproductive maturity. In other societies adolescence is understood in broader terms the encompass psychological, social and moral terrain as well as the strictly physical aspects of maturation. In these societies the term adolescence typically refers to the period between the ages 12 and 20 is roughly equivalent to the world teens (WHO, 2014).

The college students are prone to get social problems like academic challenges, difficulties with social interactions, low self-esteem conflict resolution,

and the psychological problems as depression, anxiety mood and mind altering and the physical problems like infections mononucleosis, sexually transmitted disease, Endocrine disorders, urinary tract infections, Iron deficiency, and menstrual abnormalities. Some of the major common problems are menstrual problems (78%) anemia (15.5%) and infection (10.6%). About 10% of women who have menstrual problems of they cannot work, attend school or participate in their normal daily activities. Which can further lead to poor academic result. They feel reluctant to attend social functions and remain isolated due to dysmenorrhea (Billy Henry et al 2008).

The term dysmenorrhea is derived from the Greek words dys (difficult, painful or abnormal) meno (month) and rhea (flow). It is considered as a very common gynecological problems. Dysmenorrhea (menstrual cramps) are throbbing or cramping pains in the lower abdomen which radiate in to the thighs. Many women experience menstrual cramps just before and during their menstrual periods. For some women, the discomfort is merely annoying (Wikipedia).

Dysmenorrhea can be classified in to two types (i) Primary dysmenorrhea and (ii) Secondary dysmenorrhea. Primary dysmenorrhea occurs when there is no identifiable pelvic disease and tends to occur in every ovulatory cycle. Secondary dysmenorrhea can occurs many years after menarche and is associated with identifiable pelvic pathology (Eg. Endometriosis, Polyps, Fibroids). Dysmenorrhea is caused by the release of prostaglandin in the menstrual fluid which cause uterine contractions responsible for pain (Deligeoraglou 2009).

The etiology of primary dysmenorrhea is not precisely understood but most symptoms can be explained by the action of uterine Prostaglandins particularly PG

f2∝. It may be associated with other symptoms such as nausea, vomiting, diarrhea, back ache, Fatigue, headache, dizziness and fainting. The burden of dysmenorrhea is greater than any other gynecological complaints 38% of women regularly use medical therapy to treat their dysmenorrhea symptoms (Mei - Ling et al 2013).

Traditionally in India, variety of folk medicines has been used to treat day to day minor disorders such as dysmenorrhea, indigestion nausea. Among various folk medicines, ginger is known to have out weighing benefits (Alie et al 2008).

Ginger has been recognized as the 'universal medicine' by the ancient oriental of China. Today ginger remains a component of more than 50% of the traditional herbal remedies and has been used to treat nausea, indigestion, fever and infection to promote vitality and longevity. Also, ginger has been used for the treatment of dysmenorrhea as a spasmodic, anti – inflammatory and circulatory stimulant (Ostrazenski 2002, Yassin 2012).

The Food and Drug Administration (FDA) has classified ginger as a safe herb. The rhizome (underground stem) is used as a spice and also medicine. It can be used fresh, dried and powdered or as a juice or oil. The anti – inflammatory effects of ginger has been reported to result from its efficacy in the inhibition of cyclooxygenase and 5 lipoxygenase followed by the reduction of leukoterine and Prostaglandin synthesis (Van Breemen, Tao and Li 2011).

A study was conducted in western Iran to assess the effectiveness of ginger in providing relief to patients of primary dysmenorrhea. The study result showed that pain in ginger intervention group 29 (82.85%) was significantly greater than that of placebo group 16 (47.05%). Hence it conclude that Ginger is effective in minimizing the Pain severity in Primary dysmenorrhea.

A study was conducted by Halder to examine the comparative efficacy of progressive muscle relaxation and oral intake of ginger on symptoms of dysmenorrhea. The study was carried out by 75 samples. The study was concluded that in treating symptoms of dysmenorrhea, ginger powder has efficacy superior to progressive muscle relaxation.

Therefore, Ginger tea was recommended for relief of dysmenorrhea. Ginger is a thromboxane synthetase inhibitor which activates endorphin receptor it may also be effective analgesics for dysmenorrhea (Larsen. L. 2010).

Need and significance of the study

Dysmenorrhea is common among college students which affect daily activities leading to limitations of their social, academic and recreational activities. Primary dysmenorrhea is estimated to be present 40-50%, 60% of dysmenorrhic women were having severe or moderate pain 51% reported limitation in activities and 17% were reported absenteeism.

In an epidemiologic study of an adolescent reported the prevalence of dysmenorrhea from 2,699 menarcheal adolescents, drawn from a national probability sample of 12 to 17 years – old girls (the National Health Examination Survey), were analyzed by bivariate and multivariate analytic techniques for biologic, Psychologic and demographic correlates of dysmenorrhea of 1,611 adolescents (59.7%) who report dysmenorrhea, 14% frequently miss school because of cramps.

According to British authorities reports 80% of world women have different degrees of dysmenorrhea. The prevalence of dysmenorrhea in global level is estimated to be present in 40-50% of them with severe forms and in 15% of them with

moderate forms and in 15% of them with mild forms. A dysmenorrhea incidence of 33.5% was reported among college students in India. In recent times George and Bhaduri concluded that 87.87% is a common problem in India. The prevalence of dysmenorrhea in Tamil Nadu is 76.30%, 57% had severe and 19.20% had mild dysmenorrhea. According to some international reports the prevalence of dysmenorrhea is very high and atleast 50% of women experience this problem throughout their years (International Journal of Pharma and Bio Science, 2012).

Dysmenorrhea has been reported to be severe 10% young women resulting in their incapacitation for first 3-4 days of their menstrual cycle. Menstrual pain may be accompanied by various symptoms that can disrupts the life of women at school work, home and interfere with social interactions resulting in isolation (Veras – Goday et al 2009).

A multi – choice questionnaire was administered to 182 adolescent girls ages 14-18 years to assess the prevalence of dysmenorrhea, the morbidity associated with dysmenorrhea, and level of knowledge regarding available treatment of the group, 72.7% reported “pain or discomfort” during their period, 58.9% reported decreased activity, and 45.6% reported school or work absenteeism.

On the other hand, alternative treatment options such as herbs, dietary supplements and vitamins and minerals have been seek to treat women’s health issues. Although a recent review found promising evidence supporting the use of Chinese herbal medicine for primary dysmenorrhea. Ginger has a long history of traditional use. It contains several constituents such as gingeroil, gingerdione, betacaratene, capsaicin caffeic acid and curcumin. A recent study by Rahnama,

Mantazeri, Husseini Kani Bakht (2012) has shown the efficacy of ginger in decreasing the intensity and duration of primary dysmenorrhea.

A study was carried out by Thenmozhi et al (2015) was find out the effectiveness of ginger tea on dysmenorrhea among adolescent girls. The study findings showed that the overall mean score (6.84 ± 0.88) which is 68.33% shows that most of the adolescent girls had severe pain during dysmenorrhea is pre test, whereas it was 4.18 ± 1.45 which is 42% in past test and the difference in mean percentage was 26.33% who had moderate pain during dysmenorrhea shows the effectiveness of ginger tea among adolescent girls with dysmenorrhea. Highly significant difference was found for three days during pre and post test (P>0.05).

A study was conducted by Farzaneh et al,(2014) to compare the effect of ginger, Zinc sulphate and placebo on the severity of primary dysmenorrhea in young women 150 female students were selected. The study findings showed that compared with Placebo receiving group, participants receiving ginger and zinc sulfate reported more alleviation of pain during the intervention (P<0.05). Ginger and zinc sulphate had similar positive effects on the improvement of primary dysmenorrhea pain in young women.

Studies have demonstrated that ginger has beneficial effect of primary dysmenorrhea. It has been shown that ginger act as an inhibitor on cyclooxygenase and lipoxygenase resulting in an prostaglandin synthesis (Chaiyakunapruk et al 2006).

A number of studies demonstrate ginger root is effective as a Pain Killer / anti inflammatory action. Consequently ginger roots drink succeeded in decreasing the menstrual pain in the current study where it concluded that it was highly statistical

significant differences regarding the pain score on the first day of menstruation ($P<0.000$) (Ozgoli et al 2009).

Ginger has been used as an anti – inflammatory, acting by inhibition of prostaglandin synthesis. Ginger is therefore worthy consideration as an analgesic in Primary dysmenorrhea. Also ginger may be effective and safe therapy for relieving pain in women with primary dysmenorrhea.

The nurse play a very important role in pain management. As per the above stated literature the investigator identified the personal experience and the experience from various community and clinical settings, dysmenorrhea as an important problem. So the investigator, planned to conduct this study by concentrating an alternative therapy that is fresh ginger tea on pain relief among adolescent girls with primary dysmenorrhea.

Statement of the problem

"A study to assess the effectiveness of ginger tea on dysmenorrhea among college students in Sree Mookambika College of Nursing, Kulasekharam, at Kanyakumari District.

Objectives of the study

- To assess the level of dysmenorrhea among college students in experimental and control group in pretest.
- To assess the level of dysmenorrhea among college students in experimental and control group in posttest.

- To determine the effectiveness of ginger tea on dysmenorrhea among college students in experimental group.

- To find the association between the pre tests level of dysmenorrhea among college students with selected demographic variables such as age, Socio – economic status, diet pattern menstrual history including age at menarche and duration of menstruation.

Hypothesis

H1- There is a significant reduction in Post test mean pain perception score of dysmenorrhea among experimental group.

H2 – There is a significant association between the severity of dysmenorrhea among college students with demographic variables such as age, education, socio – economic status, diet pattern, menstrual history including age at menarche, and duration of menstruation.

Operational definitions

1. Effectiveness

In this study it refers to the positive outcome (reduction of post test pain perception score) in experimental group after consuming ginger tea.

2. Ginger Tea

In this study it refers to the preparation of tea by boiling 1 gm piece of fresh ginger thinly sliced in 200ml water and boiled for ten minutes.

3. Dysmenorrhea

In this study it refers to the cramping pain in abdominal that may radiate to the lower back and upper thighs on the first 2 days of menstruation.

4. College students

In this study it refers to the B.Sc., (N) students in Sree Mookambika College of Nursing.

Variables

Independent Variable	-	Ginger Tea
Dependent variable	-	Dysmenorrhea
Demographic variable	-	Age, Religion, Type of family, monthly Income, Diet, BM1, and menstrual variables including age at menarche, length of menstrual cycle, onset and duration of dysmenorrhea, family history of dysmenorrheal, Impact of dysmenorrhea menstruation and treatment taken for dysmenorrhea.

Assumption

- Ginger tea improves the efficiency out of analgesics.
- Ginger tea is a more effective in reducing the severity of dysmenorrhea.
- Ginger tea has no side effects when compared with other pharmacological treatment.

Delimitation

The study is delimited to

- Those who are having regular menstrual cycle with dysmenorrhea.
- The study is conducted on the first 2 days of menstruation
- Data collection period is limited to one month only.

Ethical consideration

The study was conducted after getting approval from dissertation committee of Sree Mookambika Institute of Medical Sciences. Oral consent was obtained from each sample before intervention. Assurance and confidentiality was given to the samples.

Conceptual frame work

The conceptual frame work used for this study was based on Roys adaption model. This model consists of four levels.

1. Adaptation level.
2. The control process.
3. Effectors

4. Output.

1. Adaptation Level (Input)

Input is identified as stimuli, which can come from the environment or from with a person.

The input consists of 3 stimuli.

a) Focal stimuli

b) Contextual stimuli

c) Residual stimuli

The triggering event results from the interplay of three stimuli. The stimuli and triggering events finally ends in adaptive or maladaptive response.

a) Focal Stimuli:

The stimuli immediately confronting the person. In this study, college students with dysmenorrhea is the stimuli.

b) Contextual stimuli:

This include all the other stimuli that are present. In this study, contextual stimuli included age, religion, type of family, monthly income, age and menarche, Diet, BMI, Impact of dysmenorrhea.

c) Residual stimuli:

This is non specific such as cultural beliefs or attitudes about illness. In this study residual stimuli may be College students or care givers attitude and belief about ginger tea.

2. The Control Process:

It consists of regulator and cognator mechanisms.

Regulator Mechanism:

It is a subsystem of coping mechanisms which can come from the external environment or from with in the person. In this study the response of ginger tea on dysmenorrhea in college students. Reduced numerical pain score level is the regulator mechanism.

Cognator Mechanism:

It is a subsystem controls internal process related to higher brain functions, such as perception, information processing, learning from past experience, judgement and emotions, which is not under this study.

3. Effector :

It refer to the physiologic function self concept and role function involved in adaptation. In this study ginger tea helps to reduce dysmenorrhea among college students in the experimental group.

4. Out put :

The adaptive responses, provide feedback for the system. In this study, college students adopt to dysmenorrhea. By showing reduced pain level in the experimental group than the control group.

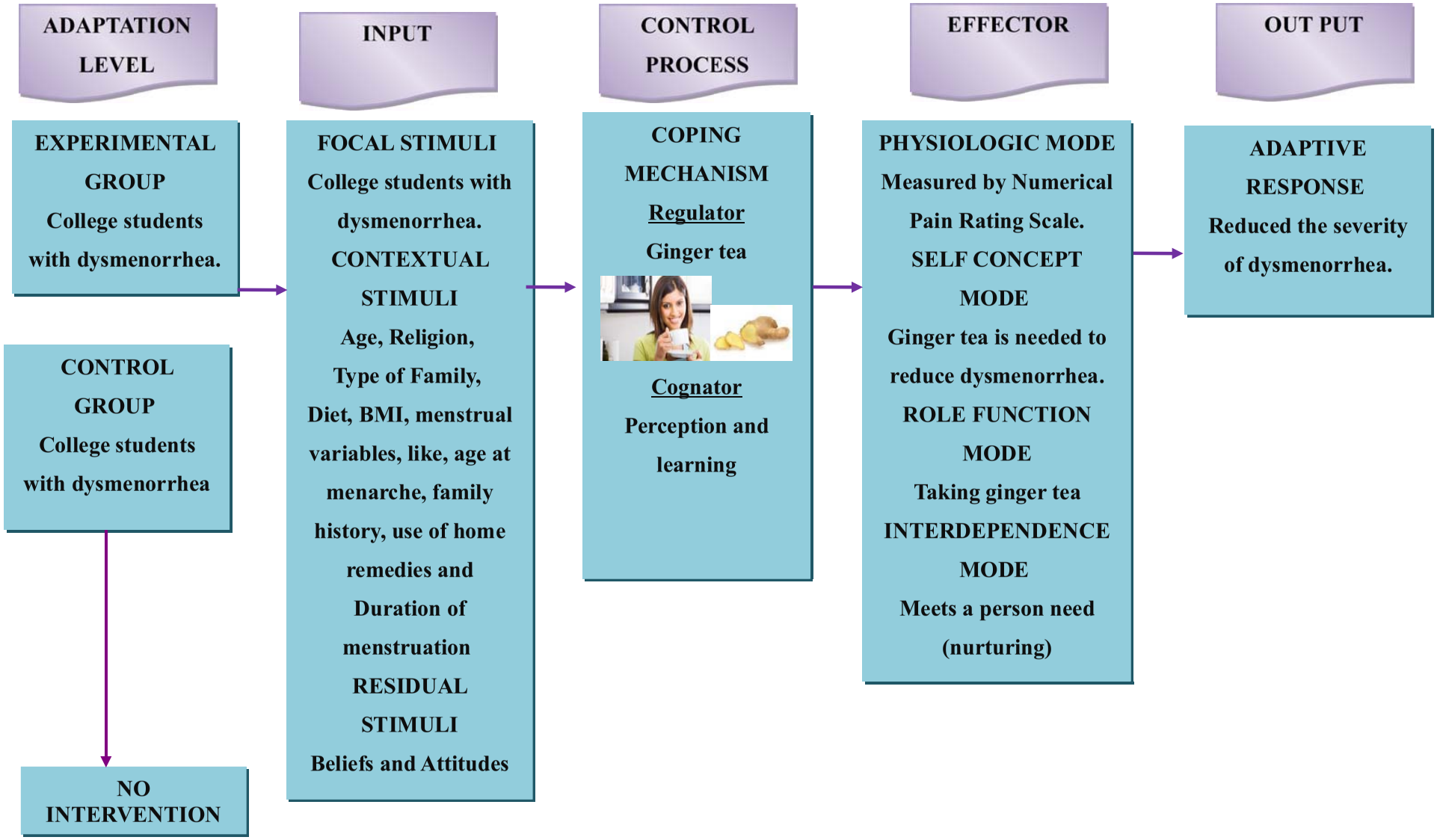


Figure 1 : **Conceptual frame work on Modified Sr. Callista Roys adaptation Model**

CHAPTER - II

Review of Literature

Review of Literature is a key step in research process. A researcher analyses existing knowledge before dealing in to a new area of study while conducting a study when interpreting the result of the study and when making judgements about applications of a new knowledge in nursing practice. Research Literature were reviewed and organized under the following heading.

1. Studies related to prevalence of dysmenorrhea.
2. Studies related to non-pharmacological measures for dysmenorrhea.
3. Studies related to effect of ginger on dysmenorrhea.

Studies related to prevalence of dysmenorrhea among college students

Rafia Bano et al (2013) was conducted a study to determine the prevalence and severity of dysmenorrhea among 100 young students at University of Hail city. Self-administered questionnaire was used. The study results showed that the mean age at menarche was found to be 12.36 ± 1.15 yrs. The prevalence of dysmenorrhea was 100%. The percentage distribution of various degrees of severity of dysmenorrhea in 100 girls was 20% mild, 4.3% moderate and 37% severe dysmenorrhea respectively. Nervvousness and depression was identified (70%) as the most common type of dysmenorrhea related symptoms headache 40% and dizziness 38%.

Kiran B et al (2012) was conducted a study to assess the prevalence, severity and treatment of dysmenarrhea in medical and nursing students. A total of 401

students from SRM university Chennai and 97 students from Vydehi Institute of Medical Sciences and Research centre Bangalore respectively were enrolled in this study. The study findings showed that 306 students in Chennai have a history of dysmenorrhea giving a prevalence of 76.30%. Among 57% had severe and 19.20% had mild dysmenorrhea. All the students enrolled in Bangalore (97) presented with a history of dysmenorrhea. 73.19% with severe and 26.80% with mild dysmenorrhea. Allopathic treatment was taken by 33% and 37.11% home made remedies by 6.20 and 2.06% and ayurvedic medicines by 0.98 and 1.03 by Chennai and Bangalore respectively.

Anandha Lakshmi et al (2011) was conducted a study to evaluate the prevalence of premenstrual syndrome and dysmenorrhea among 300 female medical students at SRM Medical college Hospital and Research centre Kanchipuram. Menstruation related questionnaire were administered. The study results showed that the prevalence of dysmenorrhea was 51% and that of the pre menstrual syndrome was 67% only 9.7% of the students consulted a physician or pharmacist 22.1% of students with dysmenorrhea reported limitation of daily activities. The severity of dysmenorrhea is significantly associated with college absenteeism. (P=0.005).

Anil K. Agarwal (2010) was conducted a study to assess the prevalence of dysmenorrhea among 970 adolescent girls of age 15-20 years studying in the higher secondary schools at Gwalior. The study findings showed that the prevalence, of dysmenorrhea in adolescent girls was found to be 79.67% most of them 37.96% suffered regularly from dysmenorrhea severity.

Hong – Gui et al (2010) was conducted a study to investigate the prevalence of dysmenorrhea in 2640 female college students in North Sichuan medical college.

Menstruation related diary data were obtained. The study reveals that dysmenorrheal occurred in 56.4% of students, In that 6.5% of dysmenorrhea students suffered from hard to bear (un bearable) menstrual pain and 6.5% had pre menstrual dysmenorrhea. Dysmenorrhea occurred on 37% of menstrual dates on average and was unrelated to irregularity of menstrual cycles. The percentages of students taking medicine with mild 4.0%, moderate 13.3% and unbearable 23.7% respectively.

Rahma Al-Kindi et al (2010) was conducted a study to determine the prevalence of dysmenorrhea in Omani high school among 380 school girls. A self administered questionnaire was given to the samples. The study findings showed that the over all 94% (n=380) of the participants had dysmenorrhea. It was mild in 27% (n=104) moderate in 41% (n=155) and severe in 32% (n=121). Dysmenorrhea was the cause of limited sports activities in 81%, decreased class concentration in 75%, restricted home work in 59%, school absenteeism in 45%, limited social activities in 25%, and decreased academic performance in 8% of the affected students. Only 3% (n=10) had consulted a physician; 21% (n=80) self medicated, and 55% (n=210) took no action. The commonest drugs used were paracetamol (n=60, 16%) ibuprofen (n=29.8%) and mefenemic acid (n=12.3%) There was no statisfically significant correlation between dysmenorrhea, demographics and menstrual characteristics.

Alaettin et al (2009) was conducted a study to evaluate the prevalence of dysmenorrhea and determine its effect on health related quality of life among 623 Female students at Dumlupinar university. The severity of dysmenorrhea was determine with a 10 point visual analog scale. The study findings showed that the average age of the study group was 20.8 ± 1.8 years. Prevalence of dysmenorrhea was found to be 72.7% and was significantly higher in coffee consumers, females with

menstrual bleeding duration ≥ 7 days and those who had a positive family history of dysmenorrhea when compared to the others (P<0.05, for each one). By multivariate analysis, coffee consumption (OR 2.084). menstrual bleeding duration ≥ 7 days (OR 1.590) and positive family history of dysmenorrhea (OR 3.043) were important risk factors of dysmenorrhea.

Ortiz MI et al (2009) was conducted a study to evaluate the factors affecting the prevalence of dysmenorrhea in a group of Mexican students. A questionnaire was administerd to 1152 high school students. The study findings showed that the dysmenorrhea had a prevalence of 48.4% and was the cause of school absences of 24% of the affected students. It was mild in 32.9%, moderate in 49.7%, and severe in 17.4% of the students, of whom 28% consulted a physician and 60.9% self-medicated. The most common over- the-counter drugs used were a combination of paracetamol, pamabrom and pyrimelamine maleate, metamazol plus butylhioscine, and naproxen. It found a significant correlation between the presence of dysmenorrhea and smoking, cycle pattern, cycle duration, flow duration and amount of flow.

Burnett et al (2005) was conducted a study to describe the prevalence, clinical effect, characteristic, and underlying risk factors of primary dysmenorrhea in Canada. A stratified random sample of 2721 women 18 years and older was identified. The study result showed that in the sample, 1546 women were having menstrual periods, of these 934(60%) met the criteria for primary dysmenorrhea. 60% of the women with primary dysmenorrhea described their pain as moderate or severe. 51% reported that their activities had been limited, and 17% reported missing school or work because of primary dysmenorrhea. The prevalence of Primary dysmenorrhea decreased with

increasing age (P<0.001) and increased with smoking (P=0.002). Users of oral contraceptives tended to have less pain the non-users (P=0.005). Scio-economic status nullilparity, and earlier age at menarchy were not independently associated with primary dysmenorrhea.

Studies related to non – pharmacological measures for dysmenorrhea

Tyseer M.F. et al (2013) was conducted a study to investigate the effect of aroma therapy massage on a group of nursing students who are suffering of primary dysmenorrhea. A randomized blind clinical trial of cross over design was used. In the first treatment phase group 1 (n=48) received aromatherapy abdominal massage for seven days prior to the menstruation using the essential oils (Linnamon, clove, rose and lavender in a base of almond oil) group 2 (n=47) received the same intervention but with placebo oil (almond oil). In the second treatment phase, the two groups switched to alternative regimen. Level and duration of pain and the amount of menstrual bleeding were evaluated at the base line and after each treatment phase. The study result suggest that the level and duration of menstrual pain and the amount of menstrual bleeding were significantly lowed in the aromatherapy group than in placebo group.

Usha Nag et al (2013) was conducted a study to analyze the effect of Yoga and meditation as alternative therapy for primary dysmenorrhea in young students and its outcome on school absentecism. 113 Medical students, Unmarried girls from Dr. Pinnamaneni Siddhartha Medical College with Primary dysmenorrhea were randomly assigned to the study (n=60) and control group (n=53). Semi structured questionnaire and the numerical pain rating scale were administered on all the participants at base line and after three months. The study group was subjected to Yoga and pranayama

and meditation. The study findings showed that a significant (P<0.0001) reduction in the perceived pain after Yoga intervention in study group 83.33%, reported complete pain relief and 11.66% reported mild pain. No reduction of pain was found in the control group. After Yoga intervention, absenteeism dropped to 10.3% and Improvement in daily activity was observed in study group.

Farzanesh Kashefi (2010) was conducted a study to assess the effect of acupressure at the Sanyinjiao point on primary dysmenorrhea among 86 students. The study group received acupressure at Sanyinjiao point, while the control group received sham acupressure. The study findings showed that the acupressure caused decline in the severity of dysmenorrhea immediately after intervention in both groups during their first menstrual cycle, although there difference was not significant (P>0.05). In addition, during the same cycle, the severity of the dysmenorrhea decreased more in study group rather than control group at 30 min, 1, 2 and 3 hours after intervention (P<0.05). During the second menstrual cycle, the severity of dysmenorrhea reduced in both, study and control groups, however, the decline was more salient among participants of the study group at all stages after the intervention (P<0.05).

Molouk Jaafarpour et al (2010) was conducted a study to compare the effect of Cinnamon and Ibuprufen for treatment of primary dysmenorrhea among 114 samples at Iranian female college students. Control group (n=38) received placebo (empty capsules contain starch TDS and a test group (n=38) received Ibuprofen (Capsule 400mg TDS) in 24 hours. Visual analogue scale was used to assess the severity, of the pain. The study showed that the mean pain severity score and mean deviation of pain in Ibuprofen and Cinnamon were less than Placebo group respectively (P<0.001) of 4

hours after the intervention there were no significant difference between the Cinnamon and Placebo group (P>0.05) of eight hours after the intervention the mean pain severity in the Ibuprofen group were significantly less than cinnamon and placebo group (P<0.001).

Teaeha Kanho Hakhoe et al (2005) was conducted a study to examine the effects of abdominal meridian (Kyongrak) massage on dysmenorrhea among 85 full time employed women. Visual analogue scale was used. 42 participants in the experimental group received abdominal meridian massage for 5minutes per day during 6 days from the 5th day before menstruation, to the first day menstruation, and 43 participants in the control group didn't receive any treatement. The study results reveals that dysmenorrhea of the experimental group were significantly lower after abdominal meridian massage than those of the control group (P<0.001).

Helms JM (1987) was conducted a study to find out the effectiveness of acupuncture in managing the pain of primary dysmenorrhea among 43 women were followed for one year in one of four groups. The Real Acupuncture group was given appropriate acupuncture and the Placebo acupuncture group was given random point accupunture on a weekly basis for three menstrual cycle standard control group was followed with out medical or acupuncture intervention the visitation control group had monthly nonacupuncture visits with the project physician. The study showed that Real acupuncture group 10 of 11 (90.9%) women showed improvement, in the Placebo Acupuncture group 4 of 11 (36.4%) in the standard control group 2 of 11 (18.2%) and in the visitation control group 1 of 10 (10%). There was a 41% reduction of analgesic medication used by the women in the real acupuncture after their

treatment series, and no change or increased use of medication seen in the other groups.

Studies related to effect of ginger on dysmenorrhea

Farzaneh Kashefi et al (2014) conducted A study to compare the effect of ginger, Zinc Sulphate ad placebo on the severity of primary dysmenorrhea among 150 high school students. The participants were divided into three groups. The first group received ginger capsules, the second group received placebo capsules for 4 days. The severity of pain was assessed by visual analogue scale. The study findings showed that the severity of pain was significant different between, before and after the intervention in both the ginger and the Zinc Sulphate groups ($P<0.001$) compared with placebo receiving group, participants receiving ginger and Zinc Sulphate reported more alleviation of pain during the intervention ($P<0.05$). Ginger and Zinc sulphate had similar positive effects on the improvement of primary dysmenorrhea pain in young women.

Howida Awed et al (2013) was conducted a study to evaluate the effect of fresh ginger usage as a home remedy on pain relieve for dysmenorrhea among 120 female students in menofia university. A quasi experimental design was used. The study result showed that 60% sample had moderate dysmenorrhea before intervention changed in to 31.7% had moderate dysmenorrheal post 2 intervention. There was statistically positive improvement in pain scoring among intervention groups with mean pain score at 2nd day of menses.

Rima Gupta et al (2013) conducted a Quasi experimental study to compare the effect of active exercise and dietary ginger vs active exercise on primary dysmenorrhea among 64 adolescent girls between the age group 17 – 19 years at

Chandigarh and Mohali colleges. Samples were divided in to two groups. Group I were given dietary ginger 500 mg twice in a day for 3 days. Starting from the day of menstruation and active exercise twice in a day except on the days of menstruation. Group two were given demonstration of active exercise and instructed to do twice a day except on the days of menstruation. The severity of dysmenorrhea was assessed by Numerical pain rating scale and menstrual distress questionnaire. The study reveals that combined effect of ginger and exercise have higher efficacy than exercise alone.

Parvin Rahnama et al (2012) was conducted a study to evaluate the effects of ginger on pain relief in primary dysmenorrhea among 120 samples at dormitories university. They were randomly assigned in two equal groups. The ginger and placebo groups in both protocol 500mg capsules of ginger root or powder. Placebo three times a day. In the first protocol ginger given two days before the onset of the menstrual period and continued through the first three days of menstrual period. In the second protocol ginger and placebo were given only for the first three days of menstrual period. The study findings showed that there were significant differences in the severity of pain between ginger and placebo groups for protocol one (P=0.015) and protocol two (P=0.029). There was also significant duration of pain between the two groups for protocol one (P=0.017) but not for protocol two.

Halder A et al (2012) was conducted on study to examine the comparative efficacy of progressive muscle relaxation and the oral intake of ginger on symptoms of dysmenorrhea among nursing students of Pune, Maharastra. The study students (n=75) were divided in to three groups, two experimental and one control. Ginger Powder 1 gm per dose was administered twice a day with warm water after meal and the second experimental group during the first three days of their menstruation. Main out come measures were the severity of selected symptoms of dysmenoarrhea. The

daily symptom calendar and 5 – point Likert scale was used to assess the severity of selected symptoms of dysmenorrhea. Main outcome measures were the severity of selected symptoms of dysmenorrhea. It was concluded that in treating symptoms of dysmenorrhea, ginger powder has efficacy superior than the progressive muscle relaxation.

Ensiyeh Jenabi (2010) was conducted a study to assess the effectiveness of ginger in providing relief to patients of primary dysmenorrhea among 70 female students at Toyserkan Azad University. The subjects were randomly divided in to two equal groups and were given either placebo or ginger in capsule form for 3 days in first menstruation cycles. The severity of pain was assessed by visual analogue scale. The study findings showed that the post therapy pain in the ginger group was significantly greater than that for Placebo group. In the ginger group 29 (82.85%) subjects reported nausea symptoms compared with 16 (4% 05%) in the Placebo group.

Ozgoli et al (2009) conducted A study to compare the effects of ginger, mefenamic acid and ibuprofen on pain in women with primary dysmenorrhea among 150 students with primary dysmenorrhea at dormitories of two medical university. Students in the ginger group took 250 mg capsules of ginger rhizome powder four times a day for three days from the 1st day of the menstrual period. Members of the other groups received 250 mg mefenamic acid or 400 mg ibuprogen respectively. The study findings showed that there was no significant differences between groups in baseline characteristics $P>0.05$. At the end of the treatment the severity of dysmenorrhea decreased in all groups and no differences were found between the groups in severity of dysmenorrhea pain relief or satisfaction with the treatment $P>0.05$.

CHAPTER - III

Methodology

This Chapter deals with the description and various steps adopted to collect and organize data for the present study. The study was intended to assess the effectiveness of ginger tea on reducing primary dysmenorrhea among adolescent girls.

The research methodology includes research approach, research design, setting, samples, sampling technique, selection criteria, development of tool, description of tool, the procedure for data collection and plan for data analysis.

Research approach

Research process is an orderly way of dealing with the research problem, where variables are generally studies in numerical form. Research approach used for the study was Quantitative evaluvative approach.

Research Design :

Research design used in this study was non – equivalent pre test and post test control group design.

The research design is diagrammatically represented as below.

E O_1 X O_2

C O_1 - O_2

E – Experimental group

O_1 – Pre test assessment of dysmenorrhea

X – Intervention (Ginger tea)

O_2 – Post test assessment of dysmenorrhea

C- Control group

- - No intervention

Setting of the study

The study was conducted in Sree Mookambika College of Nursing at Kulasekharam. Totally 300 students were studying in this college. Each class consists of 70-90 students.

Variables

Independent Variable : Ginger Tea

Dependent variable : Level of Dysmenorrhea

Demographic variables : Age, Religion, Type of family, monthly income, Diet, BMI and menstrual variables including age at menarche, length of menstrual cycle, Duration of menstruation in days, family history of dysmenorrhea, onset and duration of dysmenorrhea. Impact of menstrual cycle, and treatment taken to relieve dysmenorrhea.

Population

The target population: All the students studying inSree Mookambika College of Nursing.

Accessible Population: Students who satisfying the inclusion criteria.

Sample

The sample of the study was B.Sc., Nursing students.

Sample Size:

The sample size consists of 60 students with dysmenorrhea. Out of 60 samples 30 were in experimental group and 30 were in control group.

Sampling technique

Samples were selected based on purposive sampling technique.

Criteria for sample selection

Samples were selected based on the following inclusion and exclusion criteria.

Inclusion criteria

Students those who are,

- Having dysmenorrhea and regular menstrual cycle.
- Those who are willing to participate in this study.

Exclusion criteria

Students who are,

- Not willing to participate in the study
- Having any chronic gynecological disorder

Data collection tool

The data collection tool used for the study were,

Part I – Demographic variables

Part II – Numerical pain rating scale.

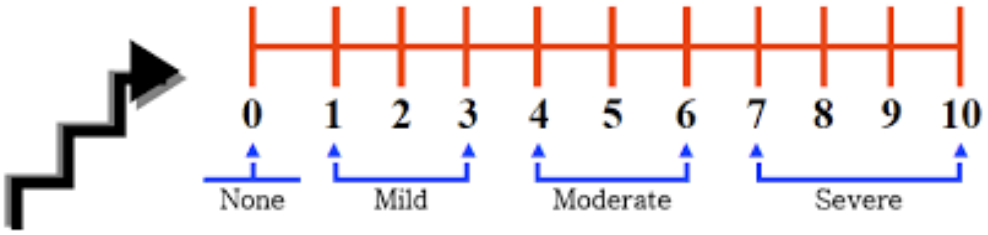
Part – I Demographic variables:

This part deals with the demographic variables such as age, religion, Type of Family, family's monthly income, Diet pattern, BM1 and the menstrual variables such as Age of menarche, length of menstrual cycle, duration of menstruation in days family history of dysmenorrhea, onset and duration of dysmenorrhea. Impact of menstrual cycle, and treatment taken to relieve dysmenorrhea.

Part – II Numerical pain rating scale:

The numerical pain rating scale is to assess the severity of dysmenorrhea before and after the intervention.

Scoring :



0 - No pain

1- 3 - Mild pain

4-6 - Moderate pain

7-10 - Severe pain

Testing of the tool

Validity

Content validity of tool was established on the basis of the opinion of five experts. Among the 5 experts one obstetrician and four obstetrics and gynecology nursing personnel. They gave a necessary suggestion and opinion was in corporate in the final preparation of tool.

Reliability

The reliability of the tool was identified by Inter – rater reliability method using spearman's rank correlation formula. The "r" value was 0.97. Hence the tool was reliable.

Pilot study

In order to find out the feasibility and practibility of the study, a pilot study was conducted in Sree Mookambika School of Nursing with 6 samples (3 in control group and 3 in experimental group).

Data collection procedure

Data collection was carried out from 01/10/2015 – 31/10/2015. Formal permission for data collection were obtained from the authority of concerned college. Total 60 samples were selected on the basis of inclusion and exclusion criteria by purposive sampling method. Among 30 were in experimental group and 30 were in control group. By the survey 90 students were having dysmenorrhea among 60 students were selected in this study.

Pretest were conducted on the 1st day of menstruation to assess the severity of dysmenorrhea, with the help of numerical pain rating scale for both experimental and control group.

Ginger tea (100m1) was administered for experimental group for each time (morning, afternoon and evening). On the first 2 days of menstruation. Ginger tea was administered to the control group. Post test was conducted for the both group on 2nd day evening by using the same numerical pain rating scale.

Data analysis plan

The data were organized, tabulated, summarized and planned to be analyzed by using descriptive and inferential statistics. The following statistical test are used for analysis.

- Frequency, percentage, mean, standard deviation.
- ‘t’ test is used to find out the effectiveness of ginger tea.
- Chi-square test was used to find out the association between the selected demographic variables

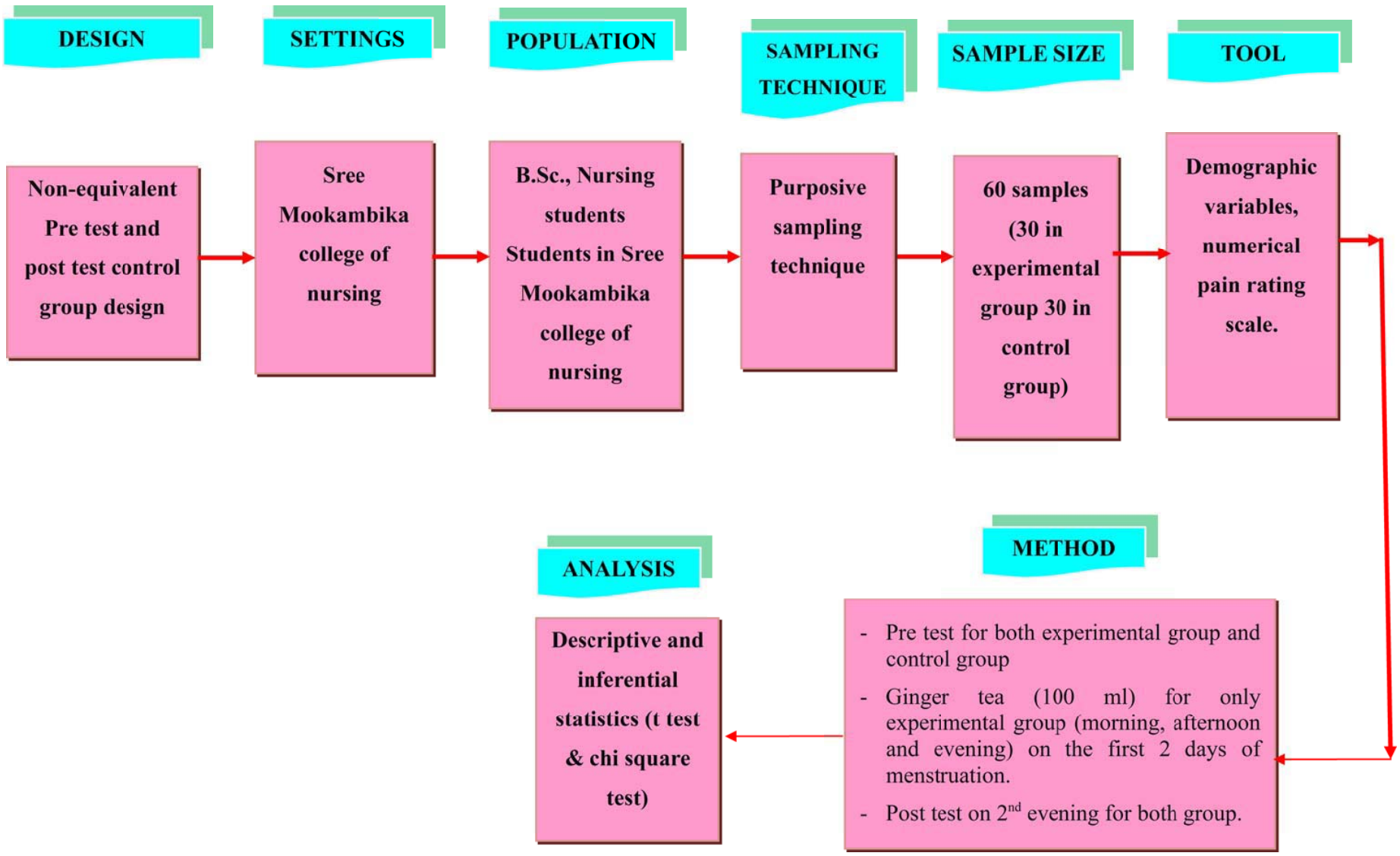


Figure 2 : **Schematic Representation of Research Design**

CHAPTER - IV

Data analysis and interpretation

Introduction

This chapter deals with the description of statistical analysis and interpretation of data. Analysis and interpretation of the data is the most important phase of the research process. Which involves the computation of certain measures along with searching for patterns of relationships that exists among data groups. Here collected data are analyzed and interpreted in accordance with study objectives. Analysis and interpretation of data includes compilation, editing, coding, classification and presentation of data.

The purpose of analyzing the data collected in a study is to describe the data in meaningful terms as the data collected does not answers the research questions or test research hypothesis. The data used is to be systematically analyzed so that trends and patterns of the relationship can be defected.

The study subjects were analyzed in terms of percentages, means and standard deviation. The statistics were interpreted by the test of significance namely “paired t” and chi-square test.

The collected data was organized, tabulated, summarized and analyzed based on the objectives and hypothesis by using descriptive and inferential statistical methods.

Presentation of Data :

The data analyzed are presented under the following section.

Section A:

This section deals with the distribution of the study subjects based on demographic variables.

Section B:

This section deals with the pretest level of dysmenorrhea among college students.

Section C:

This section deals with the post test level of dysmenorrhea among college students.

Section D:

This section deals with the comparison of pretest and posttest level of dysmenorrhea.

Section E:

This section deals with the effectiveness of Ginger tea on dysmenorrhea among college students.

Section F:

This section deals with the association between the demographic variables and level of dysmenorrhea.

Section A: Demographic Variables

This section deals with the distribution of the study subjects based on their demographic variables such as Age, Religion, Type of family, Family's Monthly Income, Diet pattern, BMI, Age at Menarche, Length of Menstrual cycle, Duration of menstruation in days. Family history of dysmenorrhea, onset and duration of menstruation Impact of menstrual cycle and treatment taken to relieve dysmenorrhea.

Table 1

Frequency and percentage Distribution of Demographic variables N= 60

Sl. No	Demographic variables	Experimental Group		Control Group	
		f	%	f	%
1.	Age in years				
	(a) 17-18 years	12	40	0	0
	(b) 19-20 years	14	47	8	27
	(c) 21-22 years	4	13	22	73
2.	Religion				
	(a) Hindu	18	60	10	33
	(b) Christian	10	33	15	50
	(c) Muslim	2	7	5	17
3.	Type of Family				
	(a) Nuclear	25	83	20	67
	(b) Joint	5	17	8	27
	(c) Extended	0	0	2	6

Table One continued……..

Sl. No	Demographic variables	Experimental Group f	Experimental Group %	Control Group f	Control Group %
4.	Family's Monthly Income				
	(a) Below Rs. 5000/-	2	7	5	17
	(b) Rs. 5000 – Rs. 10000/-	7	23	14	47
	(c) Above Rs. 10000/-	21	70	11	36
5.	Diet Pattern				
	(a) Vegetarian	3	10	0	0
	(b) Non Vegetarian	27	90	30	100
6.	Body mass Index (BMI)				
	(a) Under Weight	0	0	2	7
	(b) Normal	30	100	28	93
	(c) Over weight	0	0	0	0
	(d) Obese	0	0	0	0
	Menstrual Variables				
1.	Age at Menarche				
	(a) Below 12 years	2	7	3	10
	(b) 12-13 years	10	33	11	37
	(c) 14 years and above	18	60	16	53
2.	Length of menstrual cycle				
	(a) 21-25 days	0	0	1	3
	(b) 26-30 days	14	47	15	50
	(c) 31-35 days	16	53	14	47

Table One continued……..

Sl. No	Demographic variables	Experimental Group f	Experimental Group %	Control Group f	Control Group %
3.	Duration of menstruation in days				
	(a) Below 3 days	7	23	7	23
	(b) 3-6 days	19	63	17	57
	(c) Above 6 days	4	14	6	20
4.	Do you have family history of dysmenorrhea				
	a) Yes	9	30	12	40
	b) No	21	70	18	60
5.	Onset and duration of dysmenorrhea				
	a) Starts before menstruation, continues upto 24 hrs of menstruation.	5	17	9	30
	b) Start with the onset of menstruation continues upto 48 hours	23	77	18	60
	c) Start before menstruation, continues throughout menstruation	2	6	3	10
	d) Starts after 24 hours of menstruation and continue throughout the menstruation.	0	0	0	0
6.	Impact of menstrual cycle				
	a) Limitation in daily living activities	11	37	13	43
	b) Absenting from class	10	33	8	27
	c) Remain isolated	7	23	8	27
	d) Nil	2	7	1	3

Table One continued……

Sl. No	Demographic variables	Experimental Group		Control Group	
		f	%	f	%
7.	The treatment taken to relieve dysmenorrhea				
	a) No	24	80	28	93
	b) Yes				
	i. Self-medication& complementary therapy	6	20	2	7
	ii. Seeking physician consultation				

Age

Table 1 shows that out of 30 college students in the experimental group, 40% were in the age group 17-18 years, 47% were in 19-20 years and 13% were in the age group 21-22 years. In control group non of the sample were in 17-18 years. 27% were 19-20 years, and 73% were in 21-22 years.

Religion

Table1 shows that in the experimental group, 60% were Hindu, 33% were Christian and 7% were Muslim. In control group, 33% were Hindu, 50% were Christian 17% were Muslim.

Type of family

Table1 shows that experimental group had 83% were in nuclear family, 17% were in joint family and 0% were in extended and in control group 67% were in nuclear family, 27% were in joint family and 6% were in extended family

Family monthly income

Table1 shows that in experimental group, 7% were below Rs.5000/-, 23% were Rs.5000-Rs.10000 and 70% were above 10000/-.In control group, 17% were below Rs.5000, 47% were Rs.5000-Rs 10,000 and 36% were above Rs.10000.

Diet Pattern

Table1 shows that in experimental group, 10% were vegetarian and 90% were non-vegetarian. In control group, 100% were non vegetarian.

Body Mass Index

Table1 shows that in experimental group, 100% were have normal weight. In control group, 7% were underweight and 93% were have normal weight.

Age at menarche

Table1 shows that 7% were below 12 years, 33% were 12-13 years, and 60% were 14 years and above. In control group 10% were below 12 years and 37% were 12-13 years and 53% were in 14 years and above.

Length of menstrual cycle

Table1 shows that in experimental group 47% were 26-30 days, 53% were 31-35 days. In control group 3% were 21-25 days. 50% were 26-30 days, 47% were 31-35 days.

Duration of menstruation in days

Table1 shows that in experimental group, 23% were below 3 days, 63% were 3-6 days, 14% were above 6 days. In control group, 23% were below 3 days, 57% were 3-6 days and 20% were above 6 days.

Family history of Dysmenorrhea

Table1 shows that 30% were having family history of dysmenorrhea and 70% were having no family history of dysmenorrhea. In control group 40% had family history of dysmenorrhea and 60% had no family history of dysmenorrhea.

Onset and Duration of dysmenorrhea

Table1 shows that in experimental group, 17% were having dysmenorrhea up to 24 hours, 77% were having up to 48 hours, 6% having dysmenorrhea throughout menstruation. In control group, 30% had dysmenorrhea up to 24 hours, 60% had up to 48 hours. 10% had dysmenorrhea throughout menstruation.

Impact of menstrual cycle

Table1 shows that in experimental group 37% were having limitation in their daily activities, 33% were limitation in activities. 23% were isolated. In control group 43% were having limitation in daily activities, 27% were absenting from class and 27% were remain isolated.

Treatment taken to relieve dysmenorrhea.

Table1 shows that in experimental group 80% were no treatment taken to relief and 20% were taking treatment, in control group 93% were not taking treatment and 7% were taking treatment for dysmenorrhea.

The above findings are presented as figures from Fig. 3 to Fig. 15.

- Distribution of sample according to the age is represented as bar diagram Fig. 3
- Distribution of sample according to religion is represented as bar diagram fig. 4
- Distribution of sample according to type of family is represented as bar diagram Fig. 5
- Distribution of sample according to family monthly income is represented as bar diagram fig. 6.
- Distribution of sample according to Diet Pattern is represented as bar diagram fig. 7
- Distribution of sample according to BMI is represented as bar diagram Fig. 8
- Distribution of sample according to age at menarche is represented as bar diagram Fig. 9
- Distribution of sample according to the length of menstrual cycle is represented as bar diagram fig. 10.

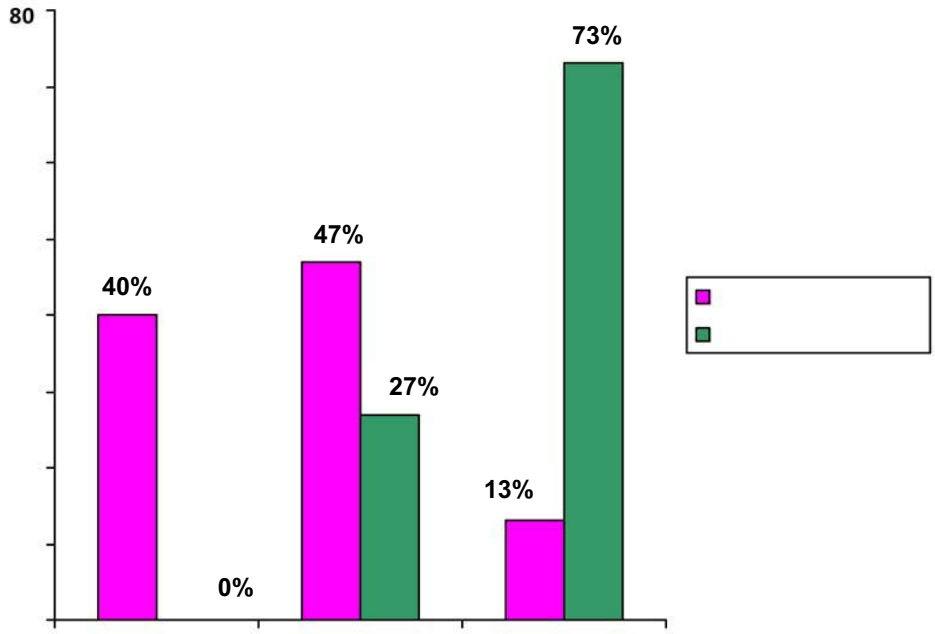
- Distribution of sample according to duration of menstruation in days in represented as bar diagram fig. 11.

- Distribution of sample according to the family history of dysmenorrhea is represented as bar diagram fig. 12

- Distribution of sample according to the onset and duration of menstruation is represented as bar diagram fig. 13.

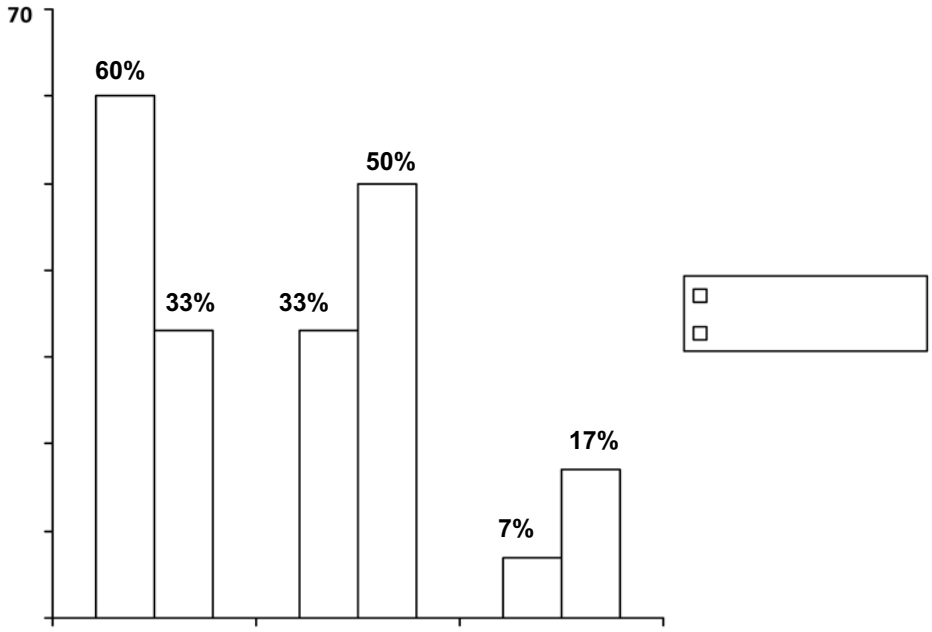
- Distribution of sample a according to the impact of menstrual cycle is represented as bar diagram fig. 14

- Distribution of sample according to treatment taken to relieve dysmenonnrhea as represented as bar diagram fig. 15



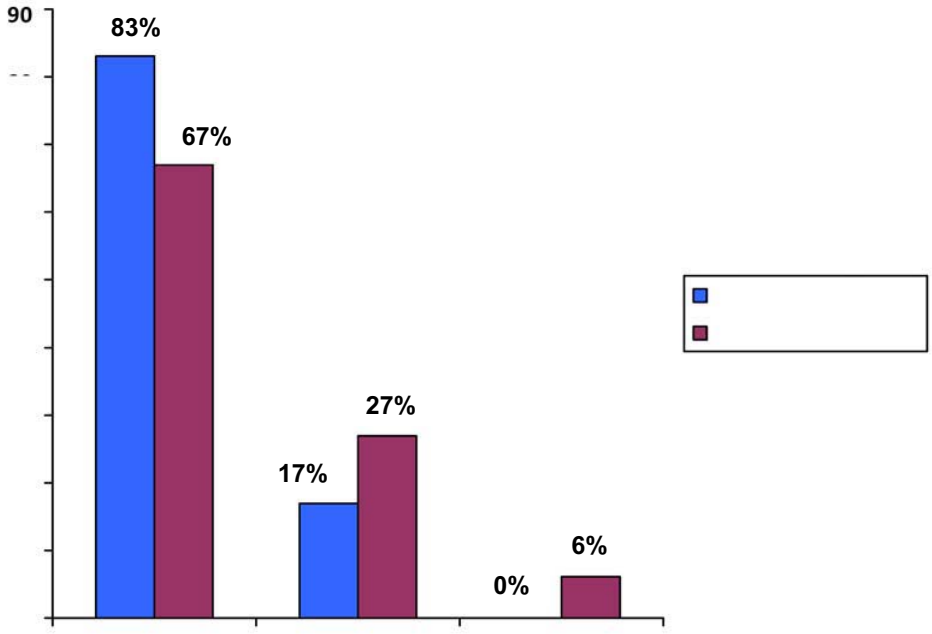
Age in years

Figure 3 : **Distribution of Sample According To Age**



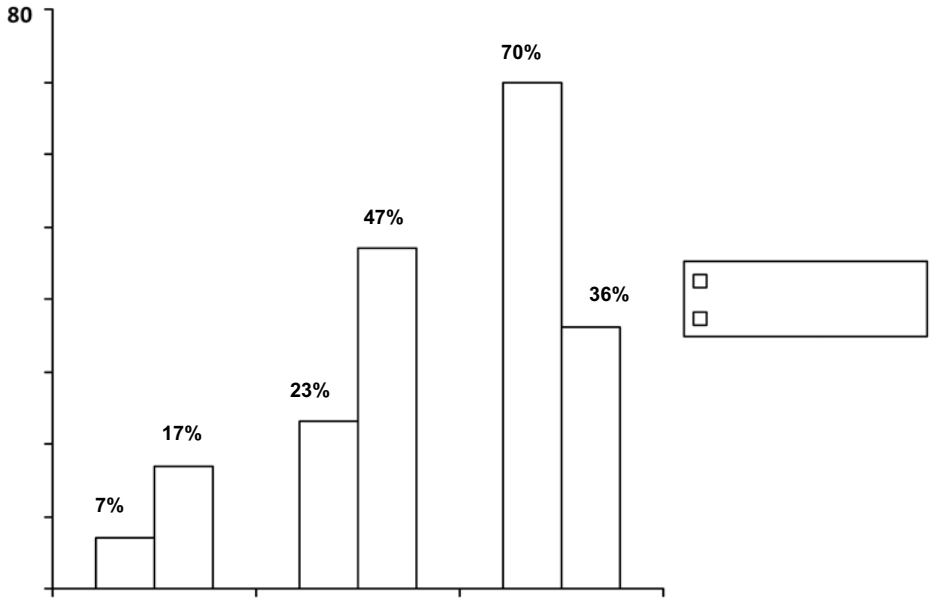
Religion

Figure 4 **: Distribution of Sample According To Religion**



Type of Family

Figure 5 **: Distribution of sample According To Type of family**



Family's Monthly Income

Figure 6 : **Distribution of Sample According To Family's Monthly Income**

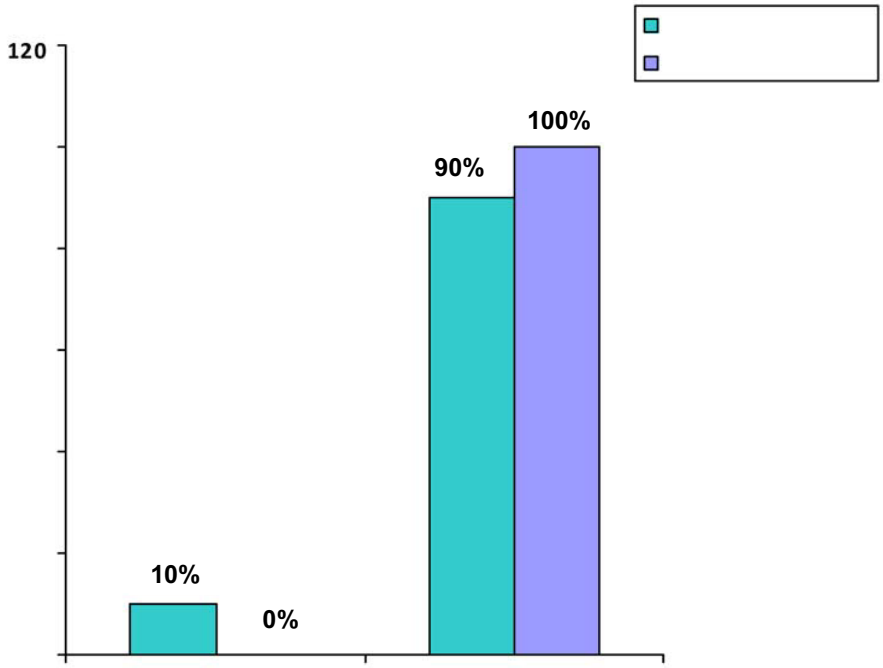


Figure 7 : **Distribution of Sample According To Diet Pattern**

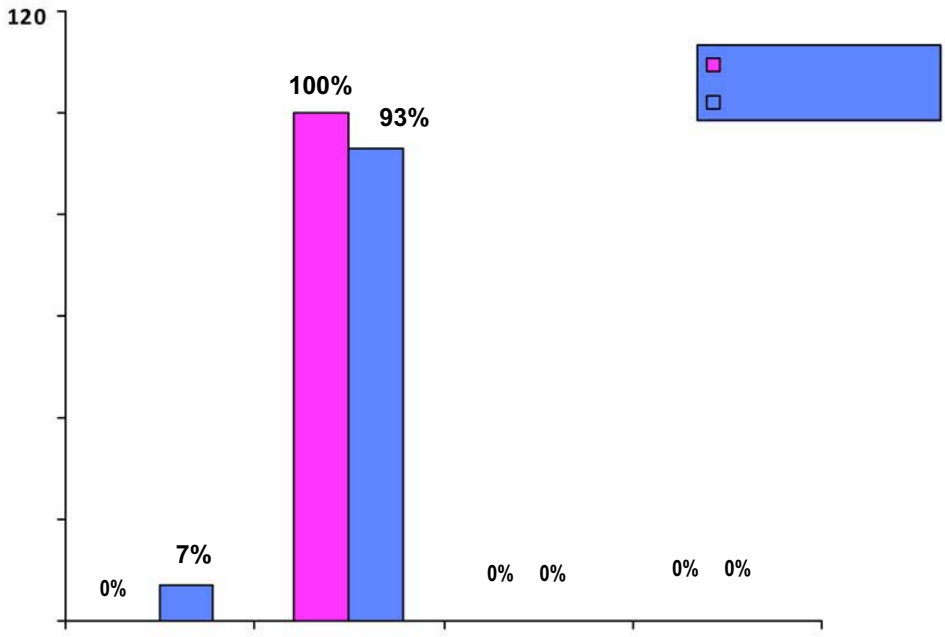


Figure 8 : **Distribution of Sample According To Body Mass Index**

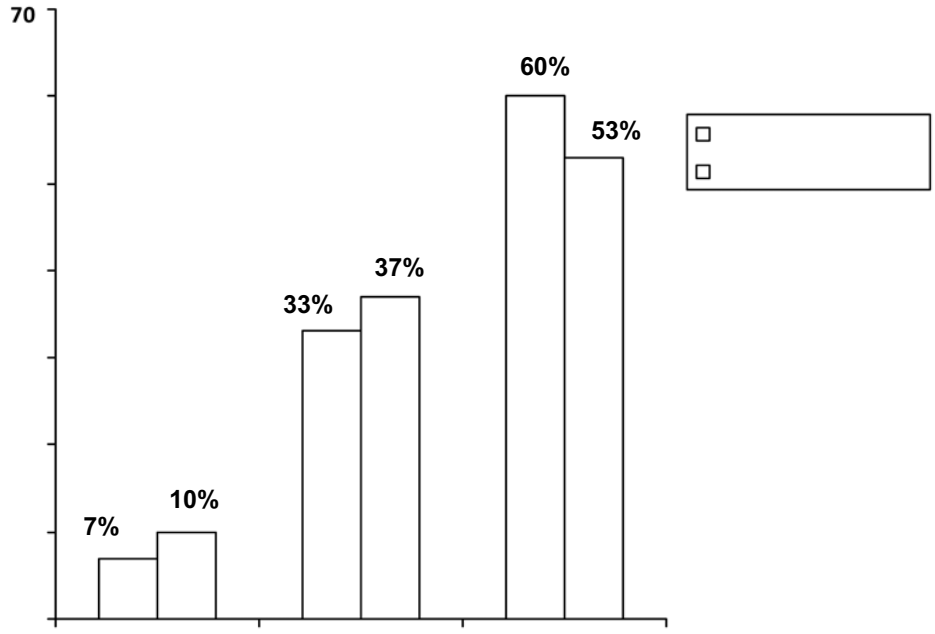
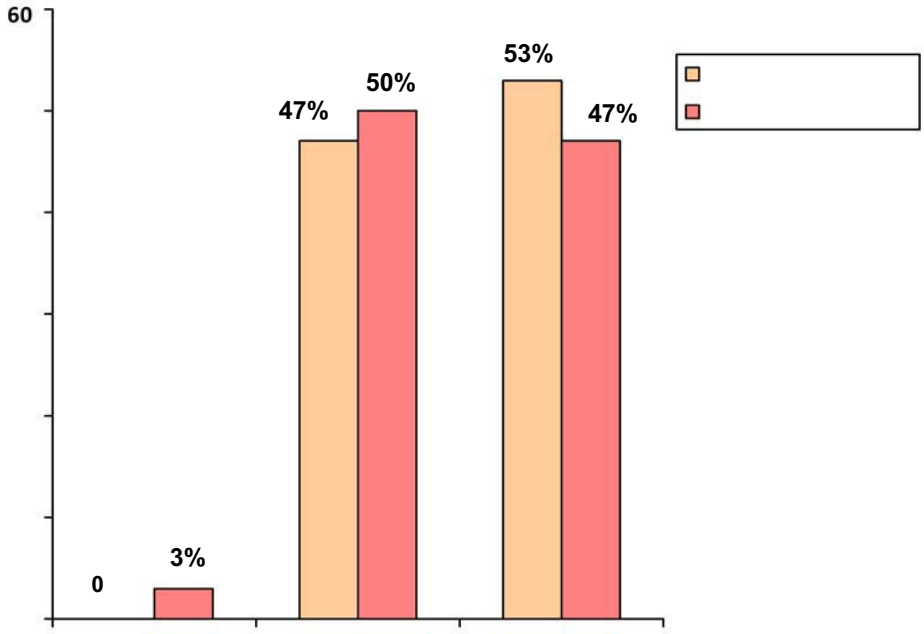


Figure 9 : **Distribution of sample According To Age at Menarche**



Length of Menstrual Cycle

Figure 10 : **Distribution of Sample According To Length of Menstrual cycle**

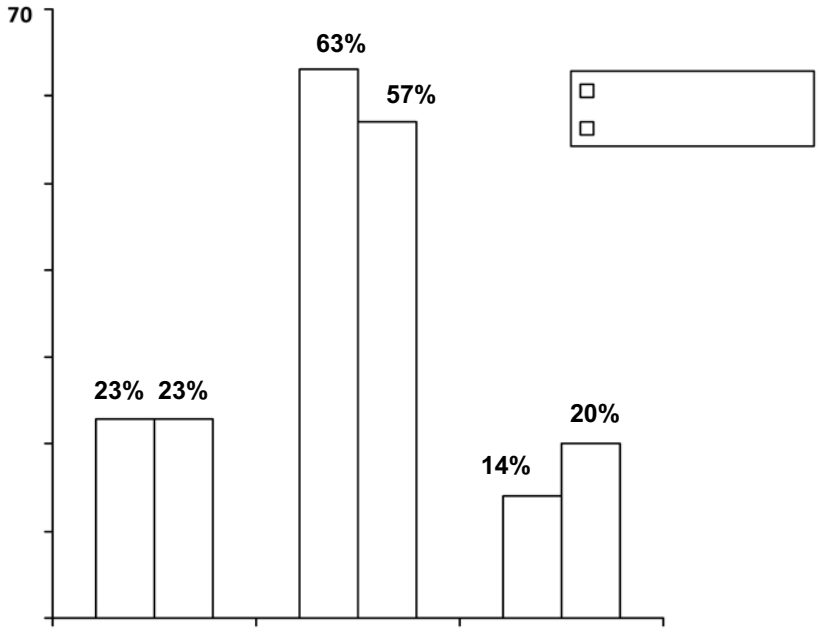
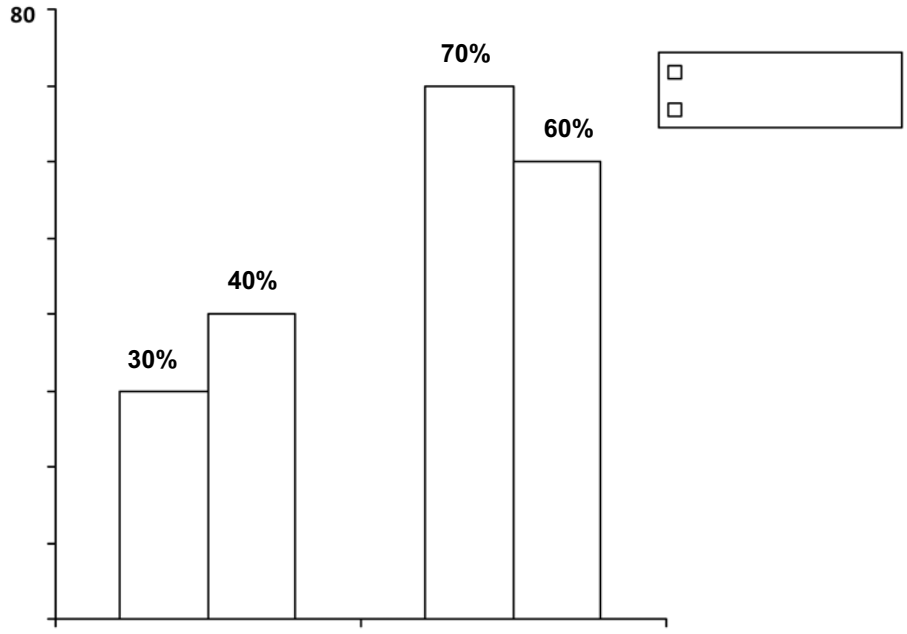
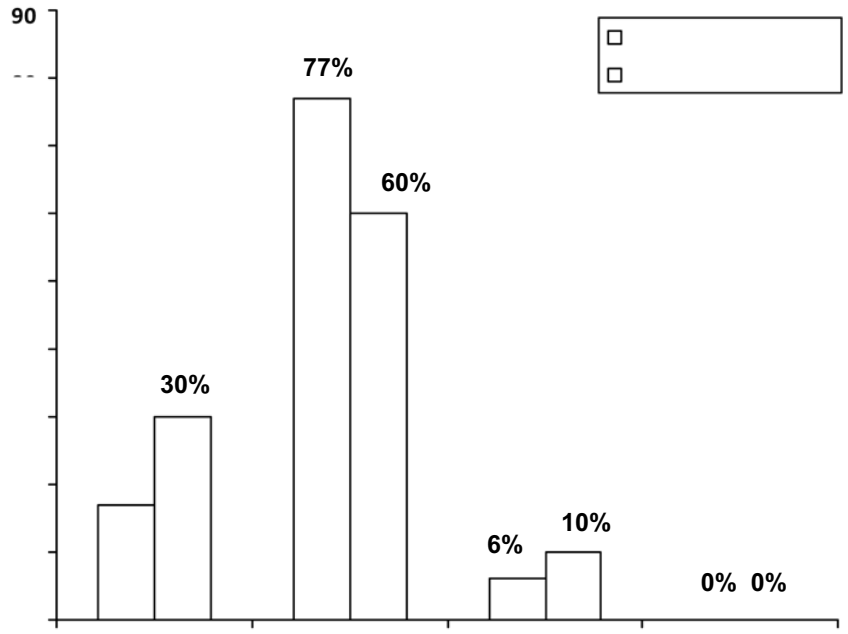


Figure 11 **: Distribution of sample According To Duration of Menstruation in days**



Family History of Dysmenorrhea

Figure 12 **: Distribution of sample According To the Family History of Dysmenorrhea**



Duration Of Dysmenorrhea

Figure 13 : **Distribution of sample According The and Duration Of Dysmenorrhea**

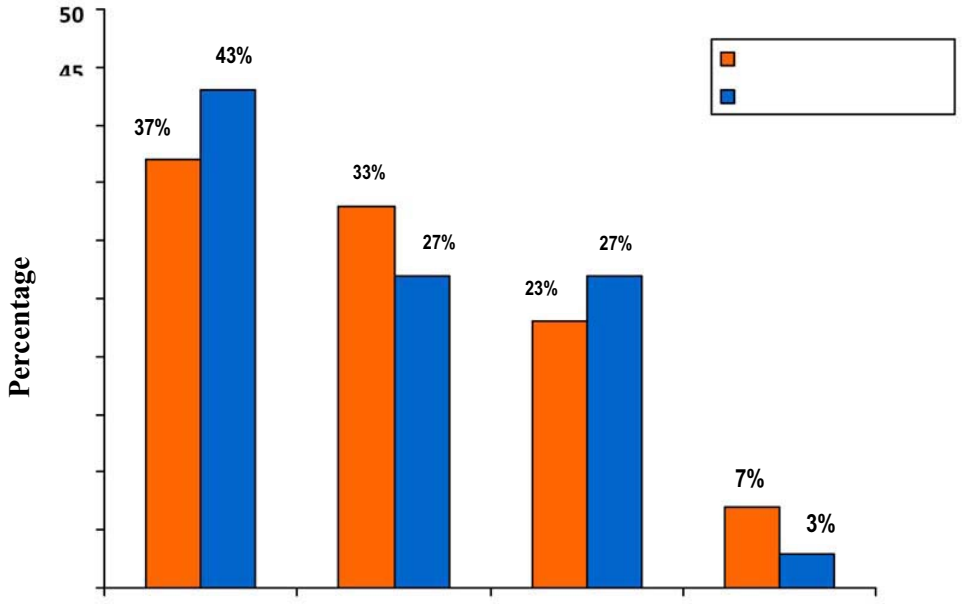
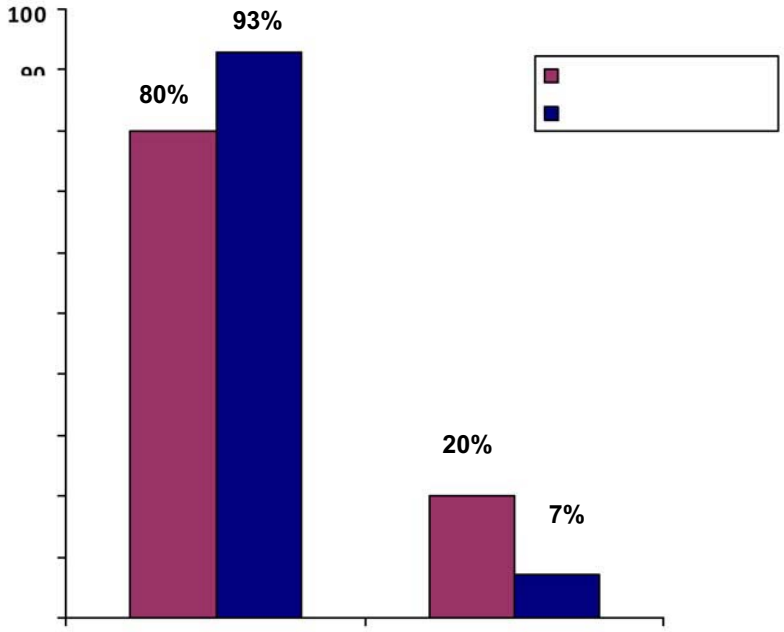


Figure 14 : **Distribution of Sample According To Impact of menstrual cycle**



Treatment Taken To Relieve Dysmenorrhea

Figure 15 **: Distribution of sample According To Treatment Taken To Relieve Dysmenorrhea**

Section B: Pretest level of dysmenorrhea among college students.

This section deals with the pretest level of dysmenorrhea among college students in experimental and control group.

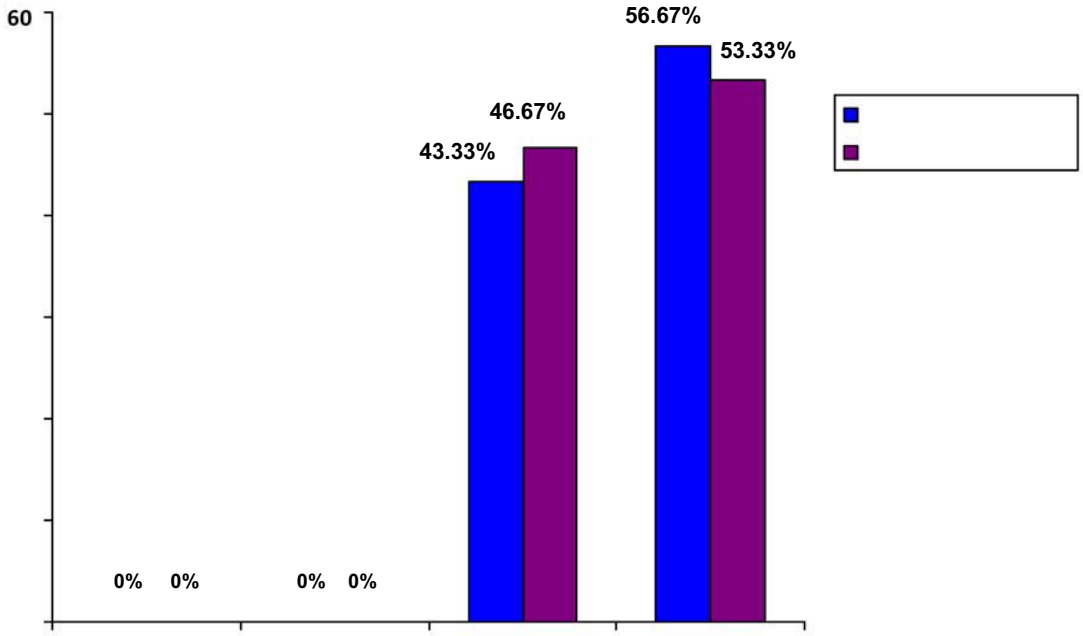
Table 2

Level of dysmenorrhea among college students (N=60)

Level of dysmenorrhea	Experimental group		Control group	
	f	%	f	%
No pain	0	0	0	0
Mild Pain	0	0	0	0
Moderate pain	13	43.33	14	46.67
Severe pain	17	56.67	16	53.33

The above table shows that majority of the sample (56.6%) had severe pain, 43.33% had moderate pain, and none of the sample had no pain and mild pain, in the experimental group. In the control group 53.3% had severe pain, 46.67% had moderate pain, and none of them had no pain and mild pain.

The above findings are presented as bar diagram in figure: 16



Pre Test Level of Dysmenorrhea

Figure 16 **: Pre Test Level of Dysmenorrhea Among College students in Both Group**

Section C : Posttest level of dysmenorrhea.

This section deals with the post test level of dysmenorrhea among college students in experimental and control group in both group.

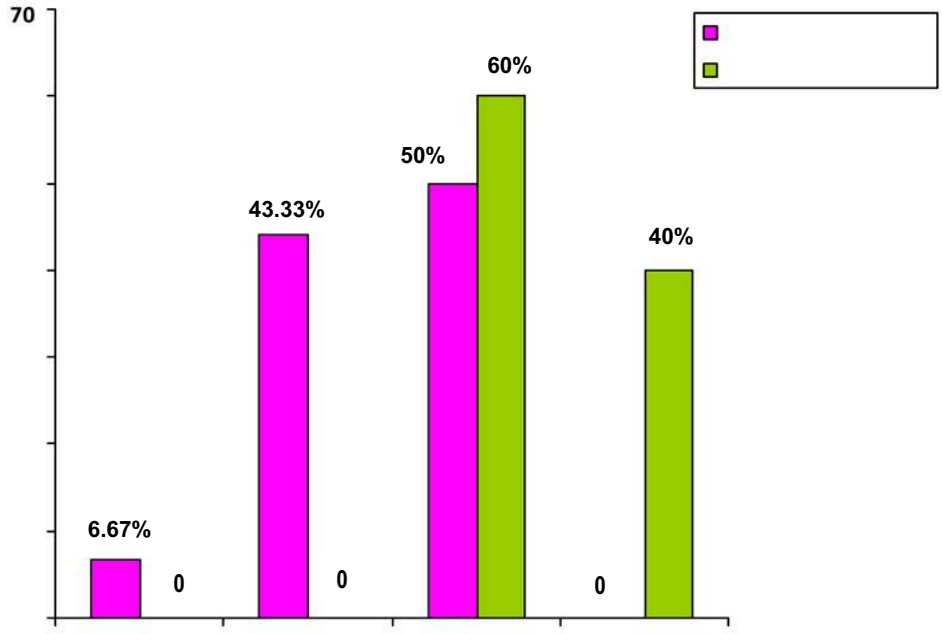
Table 3

Posttest level of dysmenorrhea (N=60)

Level of dysmenorrhea	Experimental group		Control group	
	f	%	f	%
No pain	2	6.67	0	0
Mild Pain	13	43.33	0	0
Moderate pain	15	50.00	18	60
Severe pain	0	0	12	40

The above table shows that 6.67% of the sample had no pain, 43.33% had mild pain, 50% had moderate pain, and none of them had severe pain. In control group 60% of the sample had moderate pain ,40% of them had severe pain, and none of the had no pain and mild pain.

The above findings are presented as bar diagram figure 17



Post Test Level of Dysmenorrhea

Figure 17 **: Post Test Level of Dysmenorrhea Among College Students in Both Group**

Section D : Comparison of pretest level and posttest of level of dysmenorrhea.

This section deals with the comparison of the pretest and posttest level of dysmenorrhea among College students in both group.

Table 4

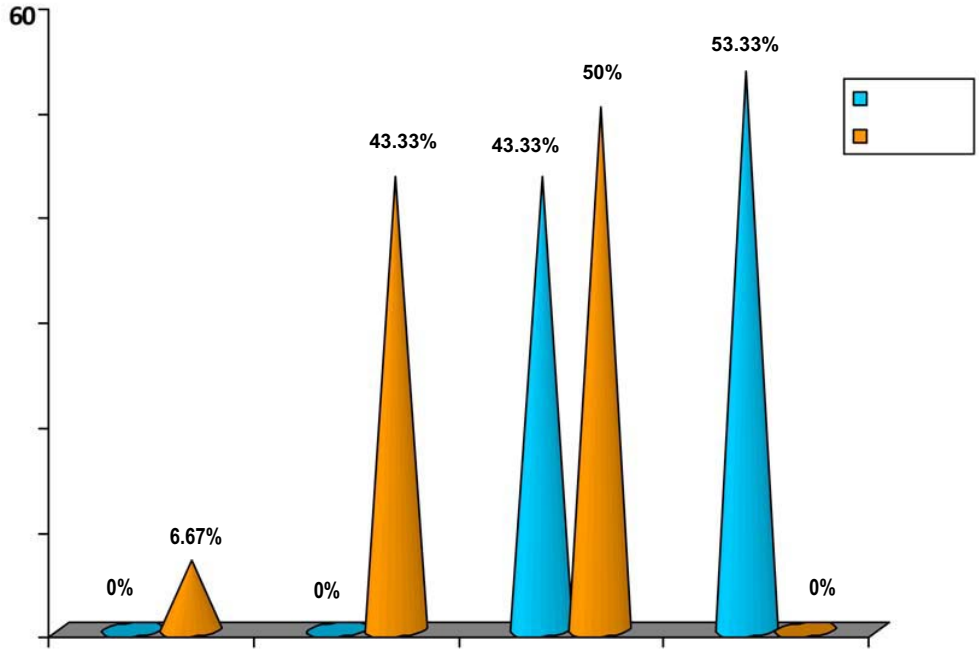
Comparison of pre and posttest level of dysmenorrhea.

Group	Pre test				Post test			
	No pain	Mild pain	Moderate Pain	Severe Pain	No pain	Mild pain	Moderate Pain	Severe Pain
Experimental Group	0%	0%	43.33%	56.67%	6.67%	43.33%	50%	0%
Control Group	0%	0%	46.67%	53.33%	0%	0%	60%	40%

The above table shows that in experimental group, the pretest score was 43.33% had moderate pain, 56.67% had severe pain and none of them having no pain and mild pain the post test score shows that 6.67% had no pain, 43.33% had mild pain, 50% of them had moderate pain and none them had severe pain.

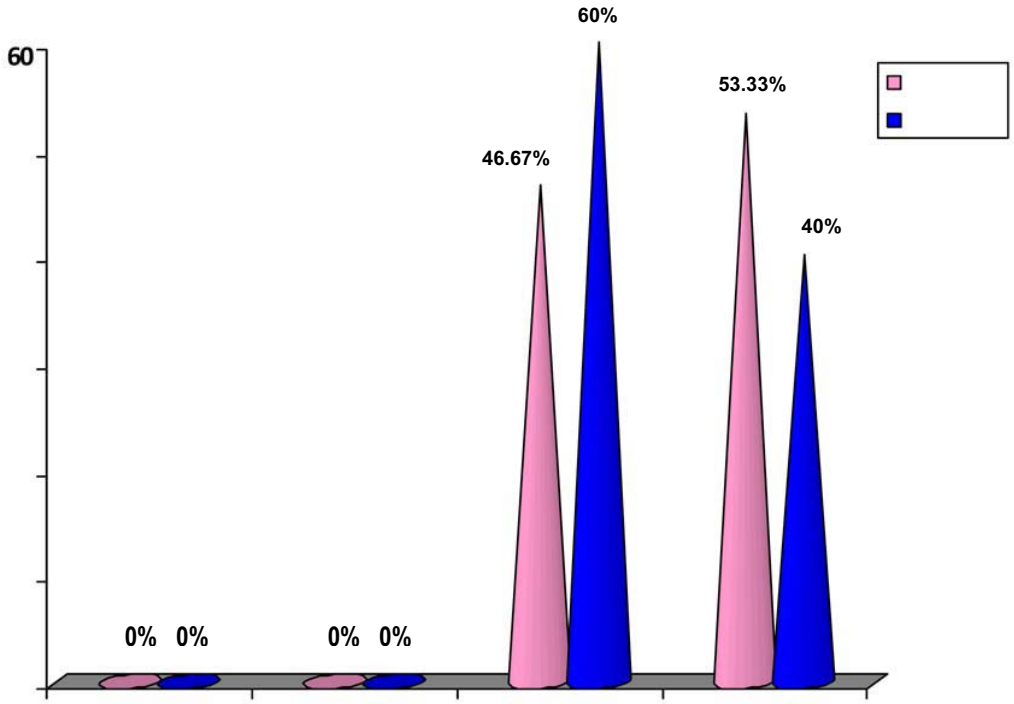
In control group, the pretest score was 46.67% had moderate pain, 53.33% had severe pain and none of them had no pain and mild pain. The post test score was 60% had moderate pain and 40% had severe pain and none of them had no pain and mild pain.

The above findings are presented as bar diagram figure 18 and figure 19.



Level of Dysmenorrhea

Figure18 **: Comparison of Pre and Post Test Level of Dysmenorrhea in Among College Students in Experimental Group.**



Level of Dysmenorrhea

Figure 19 : **Comparison of Pre and Post test Level of Dysmenorrhea Among College Students in control group.**

Section E : Effectiveness of Ginger tea on dysmenorrhea among college students.

This section deals with the effect of Ginger tea on dysmenorrhea among college students.

Table 5

Effect of Ginger tea on dysmenorrhea.

Category	Experimental group		Control group		Mean difference	't' value	df	Table value
	Mean	SD	Mean	SD	MD			
Level of Dysmenorrhea	3.36	1.54	6.26	1.17	2.9	8.10*	58	2.0

* Significance P<0.05

The above table shows that the post test mean pain score in the experimental group is 3.36 and SD 1.54 and in control group mean score is 6.26 and SD 1.17. The mean difference is 2.9. The calculated't' value is 8.10 is higher than the table value 2.0. Hence there is a reduction in level of dysmenorrhea after administration of ginger tea among college students.

The above findings are presented as bar diagram figure 20.

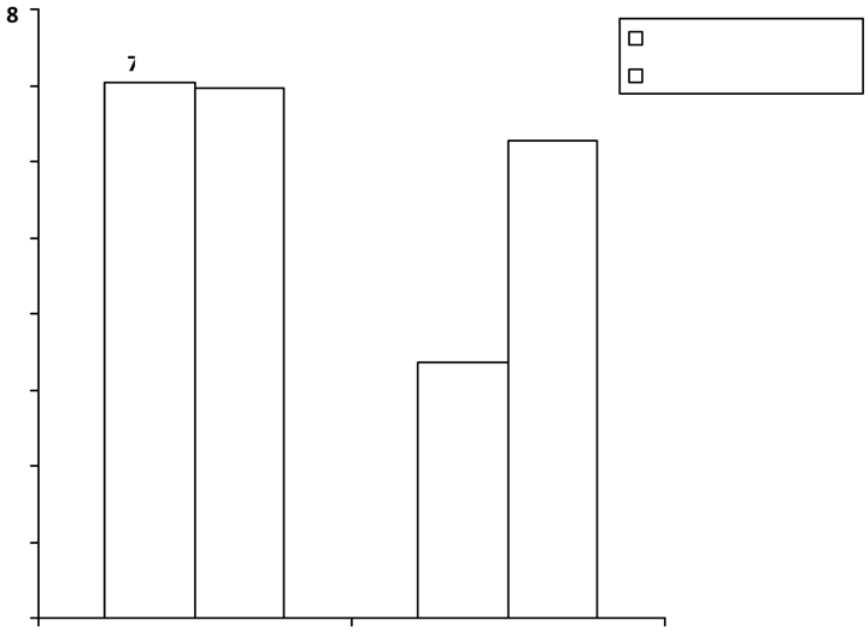


Figure 20 **: Effect of Ginger Tea on Dysmenorrhea in Experimental Group and Control Group**

Section F : Association between demographic variables with the level of dysmenorrhea.

This section deals with the association between the level of dysmenorrhea with selected demographic variables such as age, Religion, Type of family, Family's Monthly Income, Age at Menarche, Length of Menstrual cycle, Duration of menstruation in days. Family history of dysmenorrhea, onset and duration of menstruation Impact of menstrual cycle and treatment taken to relieve dysmenorrhea.

Table 6

Association between demographic variables with the level of dysmenorrhea with selected subjects (N=60)

Sl. No.	Demographic Variables	Moderate Pain		Severe Pain	
		f	%	f	%
1	Age in years				
	(a) 17-18 years	9	15	14	23
	(b) 19-20 years	12	20	17	28
	(c) 21-22 years	6	10	2	4
				χ^2=7.58*, df-2	
2	Religion				
	(a) Hindu	12	20	22	37
	(b) Christian	12	20	9	15
	(c) Muslim	3	5	2	3
				χ^2=2.41, df-2	

Table Six Continued ……..

Demographic Variables	Moderate Pain	Severe Pain

Sl. No.		f	%	f	%
3	Type of Family				
	(a) Nuclear	19	32	30	50
	(b) Joint	8	13	3	5
	(c) Extended	0	0	0	0
					χ^2=4*, df-1
4	Family's Monthly Income				
	(a) Below Rs. 5000/-	1	2	4	7
	(b) Rs. 5000 – Rs. 10000/-	8	13	16	27
	(c) Above Rs. 10000/-	17	28	14	23
					χ^2=2.18, df-2
5	Age at Menarche				
	(a) Below 12 years	1	2	4	6
	(b) 12-13 years	8	13	13	22
	(c) 14 years and above	18	30	16	27
					χ^2=2.2, df-2
6	Length of menstrual cycle				
	(a) 21-25 days	0	0	0	0
	(b) 26-30 days	19	32	10	17
	(c) 31-35 days	8	13	23	38
					χ^2=9.51*, df-1

Table Six Continued …….

Sl. No.	Demographic Variables	Moderate Pain		Severe Pain	
		f	%	f	%
7	Duration of menstruation in days				
	(a) Below 3 days	6	10	7	12
	(b) 3-6 days	18	30	19	32
	(c) Above 6 days	2	3	8	13
				χ^2=2.67, df-2	
8	Do you have family history of dysmenorrhea				
	(a) Yes	7	10	15	25
	(b) No	21	35	18	30
				χ^2=3.35, df-2	
9	Onset and duration of dysmenorrhea				
	(a) >24 hrs	7	12	9	15
	(b) 48 hours	20	33	19	32
	(c) >48 hours	0	0	5	8
	(d) <48 hours	0	0	0	0
				χ^2=4.6, df-2	
10	Impact of menstrual cycle				
	(a) Limitation in daily activities	13	22	11	19
	(b) Absenting from class	6	10	12	20
	(c) Remain isolated	5	8	10	18
	(d) Nil	3	5	0	0
				χ^2=4.35, df-3	

Table Six Continued …….

Sl. No.	Demographic Variables	Moderate Pain		Severe Pain	
		f	%	f	%
11	Treatment taken to relieve dysmenorrhea				
	(a) No	18	30	31	52
	(b) Yes				
	(i) Self medication and complementary therapy				
	(ii) Seeking physician consultation	9	15	2	3
				χ^2=7.4*, df-1	

*Significant at p<0.05

NOTE: For Chi-square test no pain, mild pain and moderate pain were combined as moderate pain.

The above table shows that the level of dysmenorrhea is associated with Age, Type of family, length of menstrual cycle and treatment taken to relieve dysmenorrhea at 0.05 level of significance and there was no association with the demographic variables such as religion, family monthly income, family history of dysmenorrhea, onset and duration of dysmenorrhea, Impact of menstrual cycle and treatment taken to relieve dysmenorrhea.

CHAPTER - V

Discussion

This chapter gives a brief account of the present study including result and discussion compared with some of the relevant studies done in different settings.

The aim of the study is to assess the effectiveness of ginger tea on dysmenorrhea among college students. The study was conducted in Sree Mookambika College of Nursing in Kanyakumari District. Nonequivalent control group design was used for the study. The pretest was conducted by using Numerical pain rating scale which is a standardized tool to assess the level of dysmenorrhea. The ginger tea was administered for the experimental group and post test was conducted by using same tool for experimental and control group. The result and discussion of the study based on the findings obtained from the statistical analysis.

Objectives of the study

- To assess the level of dysmenorrhea among college students in experimental and control group in pretest.
- To assess the level of dysmenorrhea among college students in experimental and control group in posttest.
- To determine the effectiveness of ginger tea on dysmenorrhea among college students in experimental group.

- To find the association between the pre tests level of dysmenorrhea among college students with selected demographic variables such as age, Socio – economic status, diet pattern menstrual history including age at menarche and duration of menstruation.

Distribution of selected characteristics of study subject

The demographic variables of samples were the age, religion, type of family, family monthly income, diet pattern, BMI and menstrual variables including age at menarche, length of menstrual cycle, duration of menstruation, family history of dysmenorrhea, onset and duration of menstruation, impact of menstrual cycle, treatment taken for dysmenorrhea.

Age

The study findings shows that out of 30 college students in the experimental group 40% were in the age group 17-18 years, 47% were in 19-20 years and 13% were in the age group 21-22 years. In control group none of the sample were in 17-18 years. 27% were 19-20 years, and 73% were in 21-22 years.

Religion

The study findings shows that in the experimental group, 60% were Hindu, 33% were Christian and 7% were Muslim. In control group, 33% were Hindu, 50% were Christian 17% were Muslim.

Type of family

The study findings shows that experimental group, had 83% were in nuclear family, 17% were in joint family and 0% were in extended and in control group, 67% were in nuclear family, 27% were in joint family and 6% were in extended family

Family monthly income

The study findings shows that in experimental group, 7% were below Rs.5000/-, 23% were Rs.5000-Rs.10000 and 70% were above 10000/-.In control group, 17% were below Rs.5000, 47% were Rs.5000-Rs 10,000 and 36% were above Rs.10000.

Diet Pattern

The study findings shows that in experimental group, 10% were vegetarian and 90% were non-vegetarian. In control group, 100% were non vegetarian.

Body Mass Index

The study findings shows that in experimental group 100% were having normal weight. In control group 7% were underweight and 93% were having normal weight.

Age at menarche

The study findings shows that 7% were below 12 years 33% were 12-13 years and 60% were 14 years and above. In control group 10% were below 12 years and 37% were 12-13 years and 53% were in 14 years and above.

Length of menstrual cycle

The study findings shows that in experimental group. 47% were 26-30 days, 53% were 31-35 days. In control group, 3% were 21-25 days, 50% were 26-30 days, 47% were 31-35 days.

Duration of menstruation in days

The study findings shows that in experimental group, 23% were below 3 days, 63% were 3-6 days, 14% were above 6 days. In control group, 23% were below 3 days, 57% were 3-6 days and 20% were above 6 days.

Family history of Dysmenorrhea

The study findings shows that 30% were having family history of dysmenorrhea and 70% were having not having family history of dysmenorrhea. In control group 40% had family history of dysmenorrhea and 60% had not having family history of dysmenorrhea.

Onset and Duration of dysmenorrhea

The study findings shows that in experimental group, 17% were having having dysmenorrhea up to 24 hours, 77% were having dysmenorrhea up to 48 hours, 6% having dysmenorrhea throughout menstruation. In control group, 30% had dysmenorrhea up to 24 hours, 60% had dysmenorrhea up to 48 hours. 10% had dysmenorrhea throughout menstruation.

Impact of menstrual cycle

The study findings shows that in experimental group 37% were having limitation daily activities, 33% were having limitation in their daily activities. 23% were remain isolated. 7% were nil. In control group 43% were limitation in were having limitation in their daily activities 27% were absenting from class, 27% and were remain isolated.

Treatment taken to relieve dysmenorrhea.

The study findings shows that in experimental group 80% were not taking treatment for dysmenorrhea and 20% were taking treatment, in control group 93% were not taking treatment and 7% were taking treatment.

The study findings of the 60 samples (30 in experimental groups and 30 in control groups) were discussed based on the objectives of the study.

The first objective was to assess the level of dysmenorrhea among college students in control group and pretest. This study reveals that in experimental group the findings shows that 0% were having mild pain, 43.33% were having moderate pain, and 56.67 were having severe pain having severe pain. In control group 46.67% were having moderate pain, and 53.33% were having severe pain.

The study findings was concurrent with the following study Rafia Bano et al (2013) was conducted a study to determine the severity of dysmenorrhea among 100 young students at University of Hail city. Self-administered questionnaire was used. The study results showed that the mean age at menarche was found to be 12.36 ± 1.15 yrs. The percentage distribution of various degrees of severity of dysmenorrhea in 100

girls was 20% mild, 4.3% moderate and 37% severe dysmenorrhea respectively. Nervousness and depression was identified (70%) as the most common type of dysmenorrhea related symptoms headache 40% and dizziness 38%.

The second objective was to assess the level of dysmenorrhea among college students in experimental and control group in post test. This study reveals that in experimental group 6.67% had no pain, 43.33% had mild pain, 50% had moderate pain, and none of them had severe pain. In control group 60% had moderate pain and 40% having severe pain.

The third objective of the study was to assess the effectiveness of ginger tea on dysmenorrhea among adolescent girls in experimental group. The pretest mean value is 7.03 and the posttest mean value is 3.36 and the mean difference is 2.9 and the 't' value is 15.19. Hence there was a significant reduction of dysmenorrhea among adolescent girls. The study findings were congruent with the following study was done by Padmavathi et al 2015 was conducted a study to find out the effectiveness of ginger tea on dysmenorrhea among adolescent girls. Pre experimental study one group pre and posttest design with experimental approach was used. The data were collected from 43 adolescent girls with dysmenorrhea selected by purposive sampling technique. Highest percentage (87%, 74%, & 70%) of the adolescent girls had severe pain during pretest, whereas it was 37% & none of them in posttest day1, day2 & day3, respectively. Over all mean score (6.84 ± 0.88) which is 68.33% shows that most of the adolescent girls had severe dysmenorrhea is pretest, where as it was 4.18 ± 1.45 which is 42% in posttest and the difference in mean percentage was 26.33% who had moderate dysmenorrhea shows the effectiveness of ginger tea among

adolescent girls with dysmenorrhea. Highly significant difference was found for three days during pre and posttest (P>0.05)

The fourth objective of the study was to find the association between the pretests level of dysmenorrhea among college students with selected demographic variables such as age, socio – economic status, diet pattern menstrual history including age at menarche and duration of menstruation.

There is a significant association between the level of dysmenorrhea and selected demographic variables. So the research hypothesis(H_2) was accepted.

CHAPTER - VI

Summary, Conclusion, Implication, Limitation and Recommendations

This chapter gives a brief account of the present study along with the summary of the findings, conclusions, limitations of the study, implications and recommendations of the study.

Summary

Dysmenorrhea is common among students which affect daily activities leading to limitations of their social academic and recreational activities. The alternative treatment such as herbs, dietary supplements and vitamins and minerals have been seek to treat women's health issues. Although a use of Ginger as an herbal medicine for primary dysmenorrhea.

In this context the present study attempted to assess the effectiveness of Ginger tea on dysmenorrhea among college students in Sree Mookambika College of Nursing.

The present study approach used was quantitative approach. The research design was non – equivalent control group design.

The tool used for the study consists of two parts. Part I consist of the demographic and menstrual variables. Part II is the Numerical pain rating scale to assess the severity of dysmenorrhea. The reliability of the tool was measured by inter

rater reliability the 'r' value is 0.97 for the pain scale. The pilot study was conducted. It proved that the tool and design were appropriate for the study.

The main study was conducted from October 1st to October 31st. 60 samples were selected by purposive sampling technique. 30 were in experimental group and 30 were in control group. Pretest was conducted by using numerical pain rating scale for experimental and control group. The ginger tea (100 ml) was administered to experimental group thrice for the first 2 days of menstruation. The post test was conducted by using the same numerical pain scale, for both experimental group and control group. The collected data were analyzed based on descriptive and inferential statistics.

Objectives of the Study

- To assess the level of dysmenorrhea among college students in experimental and control group in pretest.
- To assess the level of dysmenorrhea among college students in experimental and control group in posttest.
- To determine the effectiveness of ginger tea on dysmenorrhea among college students in experimental group.
- To find the association between the pretests level of dysmenorrhea among college students with selected demographic variables such as age, Socio – economic status, diet pattern menstrual history including age at menarche and duration of menstruation.

Hypothesis

- There is a significant reduction in posttest mean pain perception score of dysmenorrhea among experimental group.

- There is a significant association between the severity of dysmenorrhea among adolescent girls with demographic variables such as age, education, socio – economic status, diet pattern, menstrual history including age at menarche and duration of menstruation.

Major Findings

The collected data were analyzed based on descriptive and inferential statistics according to the above said objectives.

The findings of the study revealed that the mean pre and posttest pain score of experimental group is 7.03 and 3.66. In control group was 6.96 and 6.26. The difference of post test score between the experimental group and control group is statistically significant.

The calculated value of‘t’ test suggested that there was significant difference before and after the consumption of ginger tea among college students. Post test score in the experimental group shows there is a much reduction in the level of dysmenorrhea.

Chi-square test was used to find out the association between the demographic variables. It was found that there is an association between the demographic variables and dependent variables.

Conclusion

The conclusion drawn from the findings of the study are as follows.

1. Ginger tea was found to be an effective alternative therapy in reducing dysmenorrhea.
2. Ginger tea was found to have no side effects when compared with other pharmacological treatment.
3. Samples satisfaction is very much higher in this intervention.
4. The findings of the study enlighten the fact that Ginger tea can be used as a cost effective intervention in reducing dysmenorrhea.

Nursing Implication

The findings of the study reveal the implication on nursing practice, nursing education, nursing research and nursing administration.

Implications to Nursing Administration:

i) This study helps the nurse administrator to assess the knowledge of nurses regarding complementary and alternative therapies.

ii) The result of the study encourages the nurse administrator to conduct In service education programmes on various types of non – pharmacological treatment in reducing dysmenorrhea.

iii) This help the nurse administrator to develop and provide on effective non pharmacological measures for relieving dysmenorrhea.

iv) Nurse administrators can create awareness among nurses that Ginger tea is a very good cost – effective nursing intervention to reduce dysmenorrhea among college girls.

Implications to Nursing Education:

Alternative and complementary therapies can be integrated as an adjuvant on the existing therapies in the nursing curriculum.

i) Nurse educator can train and encourage the student nurses to implement Ginger tea as a complementary therapy for dysmenorrhea.

ii) The study can motivate student nurses to explore new strategies for effective relief of dysmenorrhea.

iii) The researcher report can be kept in library for reference of nursing personnel and other health care professionals.

iv) The nurse educator should motivated the students to learn the different non – pharmacological measures to relieve any kind of pain.

Implications to nursing practice:

i) Ginger tea is a safe and better modality which bring a higher level of satisfaction for students with dysmenorrhea.

ii) This intervention could bring benefits to students with dysmenorrhea who are on pharmacological therapy and not on the same.

iii) Ginger tea can be used as nursing intervention in reducing pain among students studying in colleges.

iv) It helps to reduce the analgesic requirement.

Implications to Nursing Research:

The nursing implication of the study lies in the scope for expanding the quality of nursing service. In this area of evidence based practice, publication of these studies will take nursing to a new horizon.

i) Nurse researcher can do various studies related to effectiveness of ginger tea on dysmenorrhea among college students.

ii) A comparative study can be done to determine the effectiveness of ginger tea with other conventional therapies.

iii) Similar study can be conducted on large sample so it could be generalized.

iv) The researchers in the nursing field can initiate evidence based nursing practice.

Limitations

i) The number of sample was 60 only. Hence generalization is not possible.

ii) Data collection period was only 1 month.

Recommendations

i) The study may be replicated with randomization in selection of a large sample.

ii) Nurse researcher can do studies related other type of alternative therapies on reducing dysmenorrheal among college students.

iii) The study can be conducted by including more number of variables and at different geographic locations.

iv) The study can be conducted to compare the level of dysmenorrhea among adolescent girls living in urban and rural areas.

v) Various others benefits of ginger tea such as to treat morning sickness, nausea related to chemotherapy.

vi) Effect of ginger tea can be assessed with different disease condition.

vii) Conduct educational programme to highlight the significance of ginger for treatment.

Bibiliography

Books

1. Barbara Hazard Munro. (1997). *Statistical Methods for health care research.*3rd edition. Lippincott. Piladelphia .

2. Basavanthappa B.T. (2002). *Nursing Research.* 2nd edition. New Delhi. Jaypee Brothers Medical Publishers.

3. Dutta D.C. (2002). *Text Book of Gynecology.* 4th edition. New central agency Calcutta.

4. George B.J. (1995). *Nursing Theories.* The base for Professional Nursing Practices. 4th edition. Pearson education.

5. Krishnan M.K. and Devi K.P. (1994). *Obstetrics and Gynecology.* 4th edition. Chennai Orient Long man Ltd.

6. Lowdermilk.. D.L. Perry. E.S., Bobak MI.. (1999). *Maternity Nursing.* 5th edition . Mosby publication . Philadelphia.

7. Mahajan B.K. (2010). *Methods of Biostatistics.* 7th edition . Philadelphia, Jaypee Brothers Medical Publishers.

8. Pilliteri Adele . (1992). *Maternal And Child Health Nursing ; Care Of Child Bearing And Child Rearing family.* 3rd edition . Lippincott , Williams and wikins.

9. Polit D.F and Hungler B.P. (1999). *Nursing Research Principles and Methods* . 6th edition. Philadelphia, Lippincott.

10. Ramakrishnan . P. (2005). *Biostatics.* 1st edition. Nagercoil, Saras Publications.

11. Ruth. V. and Linda. K. (2000). Myles *Text Book For Midwires.* 13th edition. London Churchill Livingstone.

12. Sharma K Suresh. (2002). *Nursing Research And Statistics.* 2nd edition. New Delhi, Saunders Elseviers Publications.

13. Wren. G.B. and Lobo. A.R. (1989). *Hand Book Of Obstetrics And Gynaecology.* 3rd edition. Hong Kong. British Library Cataloging in Publication.

Journals :

1. Amarjeet Singh. (2012). *Comparison the effect of ginger and exercises,* Nursing and Midwifery Journal.; Vol-9, No.4.

2. Anandha Lakshmi. (2011). *Prevalence of dysmenorrhea,* International Journal of Biological and medical research, 1011 – 1016.

3. Anju Agarwal. (2010). *Menstruation in adolescents.* Indian Journal of community medicine. Jan 35 (1); 159 – 164.

4. Elif calik. (2010). *Dysmenorrhea and its effect of quality life,* Upsala journal of medical sciences. May; 1115(2), 138 – 145.

5. Hillen. T.I. (1999). *Primary dysmenorrhea in young western women.* Journal of adolescent health. July; 40-45.

6. Jesveena Mathias. (2007). A study on the *prevalence of Premenstrual syndrome,* Nightingale Nursing Times, March; 24-27.

7. Lisa, K.M. (2008). *Menstrual related pain conditions, dysmenorrhea and migraine,* Journal of women's health, June; 879 – 891.

8. Mary Brown Parlee. (1994). *Stereotypic Benefits about menstruation, Psychosomatic medicine,* Volume 36, NO-3, May – June; 229-240.

9. Noorjahan.. (2012). *Primary dysmenorrhea, it's effect and remedies.* International journal of Pharma and Bio sciences, Vol 3/ Issue 1 Jan – March.

10. Obde et al. (2003). *Dysmenorrhea among Japanese women's.* International Journal of gynecology and obstetrics volume – 10 P, Issue 1-13-17.

11. Rahma – Al – Kindi. (2011). *Impact of dysmenorrhea.* Sutanboos university Medical journal. No 11(4) 485 – 491.

12. Thenmozhi. (2015). *Effectiveness of ginger tea on dysmenorrhea.* TNNMC JOGN, Vol 111/Issue1.

13. Tasneem. (2005). *Treatment of dysmenorrhea.* International journal of health science. (IJHSR) Vol. 5.

14. Tohany Amro,. (2013). *Use of fresh ginger herb as a home remedy.* Journal of research in nursing and midwifery. (JRNM) vol.2 (8).

15. Usha Nag. (2010). *Alternative therapy for primary dysmenorrhea.* International journal of medical and Pharmaceutical sciences. Vol. 1.5 Issue 12.

16. Zaheen. (2015). *Effect of ginger,* Journal of nursing and health sciences. (IOSR, JNHS. Vol.4) Issue vers VIII 34-39.

17. Zhan C. (1990). *Treatment of dysmenorrhea.* Journal of traditional Chinese medicine.

Net Reference

1. wwww.elsevier.com/locate/ctnm
2. www.medscape.com/viewarticle/835719
3. http://www.ncbi.n/m.nih.gov/pmc2853792.
4. http://www.women-info.com/en/menstrualperiod.
5. http://onlinelibrary.wiley.com
6. http://www.livingstrong.com/article/475501-gingertea.
7. http://emedince.medscape.com
8. https://en.wikipedia.org/adolescence
9. http://www.jpma.org.pk
10. http://www.uptodate.com/primarydysmenorrhea.
11. http://www.hindawi.com
12. http://www.scopemed.org
13. www.pubmed.com
14. www.google.com

15. www.biomedscridirect.com

APPENDICES : A

SREE MOOKAMBIKA COLLEGE OF NURSING

(Approved by the Government of Tamil Nadu & Recognised by Indian Nursing Council, New Delhi, Tamil Nadu state Nurses & Midwives Council, Chennai.)
Affiliated to The Tamil Nadu Dr. M.G.R. Medical University, Chennai.

PADANILAM WELFARE TRUST, V.P.M.HOSPITAL COMPLEX, PADANILAM,
KULASEKHARAM, K.K.DIST., TAMIL NADU, PIN : 629 161.
Phone : 04651 - 280743, 280866, 280742, 280745

ETHICAL COMMITTEE CLEARANCE

Date : 23-12-2014

To

Lr. No.

Mrs. Amutha. V.M.

I YR .M.Sc (N),

Sree Mookambika College of Nursing,

Kulasekharam.

Ref: Research Topic: A Study to assess the effectiveness of Ginger tea on dysmenorrhea among college students in Sree Mookambika College of Nursing, Kulasekharam at Kanyakumari Dist.

Sub: Approval of the above reference study .

Dear Amutha .V.M.

Ethics committee of Sree Mookambika College of Nursing, Kulasekharam reviewed and discussed the study proposal documents submitted by you related to the conduct of the above referenced study in the meeting held on 23-12-2014.

The following ethical committee Members were present at the meeting held on 23-12-2014.

NAME	PROFESSION	POSITION IN THE COMMITTEE
Prof. Mrs. Santhi Letha	Nursing	Chair Person
Dr. Kani Raj Peter	Medical	Basic Medical Scientist
Dr. T.C. Suguna	Nursing	Clinician
Adv. Mohanan	Legal	Legal Expert
Prof. Mrs.Ajitha Retnam	Nursing	Member secretary
Dr.P. Selva Raj	Management	Philosopher
Mr. Natarajan	Social	Medical Social Worker
Mrs. Latha	Lay Person	Community Person

After due ethical and scientific consideration, the ethics committee has approved the above presentation submitted by you.

Regards,

Mrs. Santhi Letha PhD (N)

Ethics Committee Chairperson,

Sree Mookambika College of Nursing,

V.P.M. Complex, Padanilam, Kulasekharam.

Date : 23-12-2014

Place :Kulasekharam

APPENDICES :B

LETTER SEEKING EXPERT OPINION FOR TOOL VALIDITY

Date :

To

Madam/Sir

Sub : M.Sc Nursing Programme dissertation – Validation of study tool request – reg:

Ms/Mrs. Amutha V.M. a bonafide if II Year M.Sc Nursing student of Sree Mookambika College of Nursing is approaching you to obtain validation of study tool pertaining to her dissertation in practical fulfillment of the requirement for the degree of Master of Science in Nursing. The selected topics **"A Study to assess the effectiveness of Ginger tea on dysmenorrhea among college students in Sree Mookambika College of Nursing, Kulasekharam at Kanyakumari Dist".** In this regard I request you to kindly extent possible technical guidance and support for successful completion of dissertation.

I enclosed here with a check list for your evaluation.

Thanking You

Yours Sincerely

PRINCIPAL

PRINCIPAL
Sree Mookambika College of Nursing
Kulasekharam-629 161

APPENDICES : C

LIST OF EXPERTS FOR TOOL VALIDATION

1. **Dr. Rema.V.Nair M.D**., **D.G.O**
   Director,
   SreeMookambika Institute of Medical Science,
   Kulasekharam .

2. **Prof. Dr.Mrs.T.C.Suguna M.Sc. (N), MA (socio) Ph.D**
   HOD, Obstetrics and Gynecological Nursing
   SreeMookambika College of Nursing,
   Kulasekharam.

3. **Prof. Mrs. TarsisHenita H.J, M.Sc. (N),**
   HOD, Obstetrics and Gynaecological Nursing,
   C.S.I. College Of Nursing
   Karakonam, Trivandrum.

4. **Prof. Mrs. Arzta Sophia M.Sc. (N)**
   HOD, Obstetrics and Gynaecological Nursing,
   CSI College of Nursing,
   Neyyoor.

5. **Prof. Mrs. Shanthi, M.Sc., (N)**
   HOD, Obstetrics and Gynaecological Nursing,
   CSI JeyarajAnnapackiam College of Nursing,
   Madurai.

6. **Prof. Mrs. Rishmi, M.Sc., (N)**
   HOD, Obstetrics and Gynaecological Nursing,
   NIMS, College of Nursing,
   Neyyatankarai, Trivandrum.

APPENDICES : D

EVALUATION TOOL CHECK LIST

Name of the expert :

Designation :

College :

Respected Madam / Sir,

Kindly go through the demographic variables, and menstrual variables, please give your valuable suggestions regarding accuracy, relevancy, and appropriateness of the content. If there is any suggestions or comments, please mention in the remarks column.

PART : A

DEMOGRAPHIC VARIABLES

Sl. No	Items		Remarks
	Accepted	Not Accepted	
1			
2			
3			
4			
5			
6			

PART : B

MENSTRUAL VARIABLES

Sl. No	Items		Remarks
	Accepted	Not Accepted	
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

APPENDICES : E

DESCRIPTION OF TOOL

PART – I

Demographic variables :

Kindly read all the questions carefully and tick (✓) the right option.

1. Age in years
   (a) 17 – 18 years
   (b) 19 – 20 years
   (c) 21 – 22 years
2. Religion
   (a) Hindu
   (b) Christian
   (c) Muslim
3. Type of Family
   (a) Nuclear
   (b) Joint
   (c) Extended
4. Family's Monthly Income
   (a) Below Rs. 5000/-
   (b) Rs. 5000 – Rs. 10000/-
   (c) Above Rs. 10000/-

5. Diet pattern
    (a) Vegetarian
    (b) Non Vegetarian
6. Body mass Index (BM1)
    (a) Under weight
    (b) Normal
    (c) Over weight
    (d) Obese

Menstrual Variables :

1. Age at menarche
    (a) below 12 years
    (b) 12 - 13 years
    (c) 14 years and above
2. Length of menstrual cycle
    (a) 21 – 25 days
    (b) 26 – 30 days
    (c) 31 – 35 days
3. Duration of menstruation in days
    (a) below 3 days
    (b) 3-6 days
    (c) above 6 days
4. Do you have family history of dysmenorrhea
    (a) Yes
    (b) No

5. Onset and duration of dysmenorrhea

(a) Starts before menstruation, continues up to 24 hrs of menstruation

(b) Start with the onset of menstruation continues up to 48 hours

(c) Start before menstruation continues throughout menstruation

(d) Starts after 24 hours of menstruation and continue throughout the menstruation

6. Impact of menstrual cycle

(a) Limitation in daily living activities

(b) absenting from class

(c) Remain isolated

(d) Nil

7. The treatment taken to relieve dysmenorrhea

(a) No

(b) Yes

(i) Self-medication and complementary therapy

(ii) Seeking physician consultation

Part : II

Numerical Pain Rating Scale

It is a the standardized numerical pain rating scale to assess the severity of dysmenorrhea.

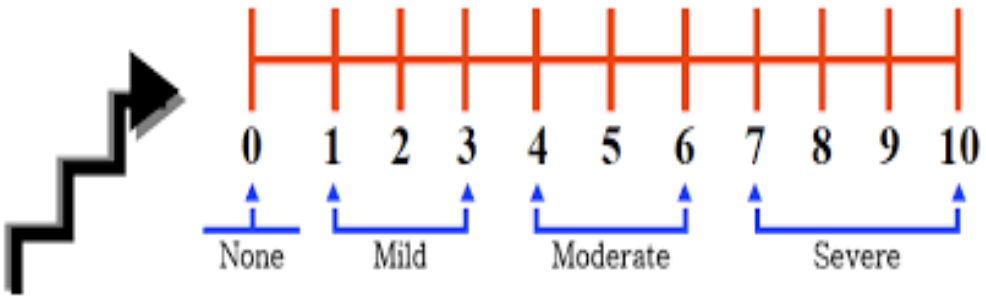
Scoring :

0 - No Pain

1-3 - Mild pain

4-6 - Moderate pain

7-10 - Severe pain



TÏ§ : ı

úSoLôQpT¥Ym

¸rLiP ®]ôdLû[LY]UôL Yô£jÕ RÏkR ®ûPûV N¬ (✓) ùNnVÜm

1. YVÕ
   (A) 17 - 18 YVÕ
   (B) 19 - 20 YVÕ
   (C) 21 - 22 YVÕ
2. URm
   (A) CkÕ
   (B) ¡±vRYm
   (C) ØvÄm
3. ÏÓmTj§u YûL
   (A) R²dÏÓmTm
   (B) áhÓÏÓmTm
   (C) ®¬Yô] ÏÓmTm
4. ÏÓmT UôR YÚUô]m
   (A) ì. 5000-dÏ ¸r
   (B) ì. 5000 ØRp ì. 10000 YûW
   (C) ì. 10000-dÏ úUp
5. EQÜ Øû\
   (A) ûNYm
   (B) AûNYm

6. GûP EVWm ®¡R Ï±ÂÓ

   (A) Ïû\Yô] GûP

   (B) N¬Vô] GûP

   (C) A§L GûP

   (D) EPpTÚUu

   GûP : EVWm :

UôR®PônT¥Ym

1. YV§tÏ YkRLôXm

   (A) 12 YV§tÏ ¸r

   (B) 12 ØRp 13 YV§p

   (C) 14 YV§tÏúUp

2. UôR®Pôn ÑZt£«u SôhLs

   (A) 21 ØRp 25 SôhLsYûW

   (B) 26 ØRp 30 SôhLsYûW

   (C) 31 ØRp 36 SôhLsYûW

3. UôR®Pôn LôXj§u SôhLs

   (A) 3 SôhLÞdÏÏû\YôL

   (B) 3 ØRp 6 SôhLsYûW

   (C) 6 SôhLÞdÏúUp

4 EeLs ÏÓmTj§p VôWôYÕUôR®PônúSWj§p A¥Y«tß YVôp AY§ÙßYÕ EiPô?

   (A) Bm

(B) CpûX

5. UôR®Pôn Y BWm©dÏmúSWØmLôXØm

(A) YVô]Õ UôR®Pôn BWm©dÏm ØuùRôPe¡, 24 U¦ úSWm YûW ùRôPoYÕ

(B) YVô]Õ UôR®Pôn BWm©dÏm NUVj§p ùRôPe¡ 48 U¦ úSWmYûWùRôPoYÕ

(C) YVô]Õ UôR®Pôn BWm©dÏm ØuùRôPe¡, UôR®PônLôXm ØÝYÕmùRôPoYÕ

(D) UôR®Pôn BWm©jR 24 U¦úSWmL¯kR ©u ùRôPe¡ UôR®PônLôXm ØÝYÕm ùRôPoYÕ

6. UôR®Pô«]ôpHtTÓmRôdLm

(A) Au\ôP TZdL YZdLeL°p HtTÓm Uôt\m

(B) Ts°dÏ ùNpYRtÏ CVXôûU

(C) R²ûUTÓjRlThP

(D) JußªpûX

7. UôR®Pôn Y«ÚkÕ ¨YôWQm ùT\ úUtùLôiP £¡hûNØû\

(A) CpûX

(B) Bm

(i) ÑVUôL UÚkÕ GÓjRp, UôtßYûL £¡hûN

(ii) UÚjÕYûW AÔÏRp

APPENDICES: F

Intervention

Ginger tea

Introduction

Ginger the rhizome of ZingiberOfficinale has been used in western herbal medicine as a spasmodic, anti-inflammatory and circulatory stimulant. Gingertea was recommended for relief of dysmenorrhea. Ginger is a thromboxane synthesis inhibitor, which activates endorphin receptors if may also be an effective analgesic for dysmenorrhea.

Action of ginger on dysmenorrhea:

Ginger has been used historically for its ant-inflammatory properties. Ginger was a effective as a mefanamic acid and ibuprofen in the relief of menstrual pain. The cause of menstrual cramps is thought to be due to an increased production of prostaglandins in the endometrial (lining of the uterus). Menstrual blood of women with primary dysmenorrhea has greater amounts of the prospasmodic and proinflammatory prostaglandins. PGE_2 and PGF_2 alpha. Both mefenamic acid and ibuprofen act as inhibitors of the synthesis of these prostaglandins.

Ginger also inhibits cyclooxygenase and lipoxygenase pathways in prostaglandin synthesis and the gingerols in ginger have anti-inflammatory effects in vitro and in vivo. It is this ability of ginger to inhibit cyclaxygenase and lipoxygenase that leads to reduction in leukotriene and prostaglandins and consequent pain relief.

Ginger has also been found to contain salicylates, although less than 1mg of salicylate, which would lea one to conclude that the salicylate content would not account for its pain relieving effects. Consider using ginger root either done or in combination with other important natural ingredients in the relief of menstrual cramps such as the evidenced based niacin and vitamin B6, and traditional botanicals crampbark, varerian and wild yam.

Menstruation cause release of certain hormones that act on the uterus and cause contractions resulting in menstrual pain. Gingerols present inhibits the production of these hormones and provides relief from the painful menstrual cramps. Ginger also reduces pia pita in the body. This found to cause cramps during periods thereby relieving menstrual pain.

Dosage:

Ginger has been used in clinical trials in doses of 250 mg to 1gm. 3-4 times daily. In general don't want to consume more than 4gm of ginger a day.

Preparation:

Preparation of Ginger Tea

Step: 1

Wash the ginger scrub it well

Step: 2

Peel the ginger and slice it thinly in small pieces.

Step: 3

Boil the Water.

Step: 4

Add the ginger slices to the water (1gm ginger for 200 ml water)

Step: 5

Boil it for 10 minutes.

Step: 6

Strain the tea after steeping or boiling and serve, Add sugar if desired.

Step: 7

Drink hot, at room temperature or cold as preferred.